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Supreme Court, U. S.
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IN THE

Supreme Court of the United States

OCTOBER TERM, 1971.

No.

MONSANTO COMPANY,
Petitioner,

vs.

ROHM & HAAS COMPANY,
Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE THIRD CIRCUIT.

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IN THE

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OCTOBER TERM, 1971.

No. .....

MONSANTO COMPANY,

Petitioner,

vs.

ROHM & HAAS COMPANY,

Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE THIRD CIRCUIT.

To the Honorable, the Chief Justice and the Associate Justices of the Supreme Court of the United States:

Your Petitioner, Monsanto Company, prays for a writ of certiorari to review the order of the United States Court of Appeals for the Third Circuit entered in the above-entitled action.

OPINIONS BELOW.

(a) Opinion and Judgment Order of the Court of Appeals for the Third Circuit, Appeal No. 19,932, filed January 12, 1972; reported at ..... F. 2d ..... (App. 1).*

(b) Order of the Court of Appeals for the Third Circuit filed February 9, 1972, denying appellant's petition for rehearing (App. 35).

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*"App. ....." citations are to the pages of the appendix to this petition.

(c) Order of the Court of Appeals for the Third Circuit amending its opinion, filed March 9, 1972 (App. 36).

(d) Opinion of the District Court for the Eastern District of Pennsylvania, Civil Action 68-1269, filed February 17, 1970; reported at 312 F. Supp. 778 (App. 38).

(e) Opinion and Order of the District Court for the Eastern District of Pennsylvania on post-trial motions, Civil Action 68-1269, filed May 21, 1970; reported at 312 F. Supp. 798 (App. 100).

JURISDICTION.

Jurisdiction of this Court is invoked under 28 U. S. C. § 1254(1).

The opinion and judgment order of the Court of Appeals affirming the decision of the District Court which the Petitioner seeks to have reviewed herein were entered January 12, 1972. The petition for rehearing was denied on February 29, 1972. The bases of jurisdiction in the district court were 28 U. S. C. §§ 1338 and 1400 and 35 U. S. C. § 271.

QUESTIONS PRESENTED.

1. Have the decisions of the District Court and the Court of Appeals in this case so eroded the procedural and substantive elements required for proof of fraudulent conduct in the procuring of a patent as to require an exercise of this Court's power of supervision to prevent unjust and improper results in the many cases pending in various federal courts in which a claim of that type of fraud is made?

2. Where an attorney submits facts to traverse a Patent Office rejection of a claim for obviousness under 35 U. S. C. § 103, should his client's patent be rendered invalid for fraudulent procurement or unenforceable for unclean

hands because the attorney decides, in the exercise of his judgment and on the basis of his understanding of the law, that certain information is not material and need not be submitted?

3. Did not the Court of Appeals err in affirming a determination that petitioner had deliberately misrepresented or withheld facts in order to mislead the Patent Office, and that the Patent Office was misled, when the only evidence of intent before the trial court was the patent attorney's testimony that the omitted information was left out because he did not consider it material, and there was no evidence at all that the Patent Office was misled?

4. If a trial court holds a patent invalid for fraudulent procurement on the basis that information material to the issue of obviousness under 35 U. S. C. § 103 was not submitted by the applicant to the Patent Office, should the court of appeals affirm without reviewing the trial court's obviousness determination relied upon to establish materiality of the information?

STATUTES AND REGULATIONS INVOLVED.

Statutes and regulations most directly involved, although not construed, in the opinion below are:

35 U. S. C. § 103. Conditions for patentability; non-obvious subject matter.

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

37 C. F. R. § 1.132. (Patent Office Practice Rule 132). Affidavits or declarations traversing grounds of rejection.

When any claim of an application is rejected on reference to a domestic patent which substantially shows or describes but does not claim the invention, or on reference to a foreign patent, or to a printed publication, or to facts within the personal knowledge of an employee of the Office, or when rejected upon a mode of capability of operation attributed to a reference, or because the alleged invention is held to be inoperative or lacking in utility, or frivolous or injurious to public health or morals, affidavits or declarations traversing these references or objections may be received.

STATEMENT OF THE CASE.

This litigation began with a civil action filed by the petitioner against respondent for infringement of its Huffman patent No. 3,382,280. Venue was properly laid in the Central District of California, but the action was transferred over plaintiff's objections to the Eastern District of Pennsylvania and tried without a jury. The patent subject matter is a chemical herbicide which has been of enormous benefit to the rice-growing industry. The respondent acknowledged infringement if the patent was held valid. The facts before the court were largely stipulated by the parties.

Judge Masterson concluded (App. 73), that the patent was invalid and unenforceable because, *inter alia*, (a) the patented subject matter was obvious under 35 U. S. C. § 103; (b) Monsanto had intentionally withheld material facts in order to mislead the Patent Office; and (c) even if the facts withheld from the Patent Office were not material, Monsanto had unclean hands (App. 73). The trial court stated that it found intentional misrepresentation "more probable than not" by applying the preponderance of the

evidence test (App. 83-84). Furthermore, in denying petitioner's post trial motions, the trial court ruled that "policy considerations" compelled the same conclusion whether or not Monsanto intended to deceive the Patent Office (App. 102) and that the patent is invalid even if the decision not to disclose certain facts was motivated by nothing more than bad judgment as to their materiality (App. 103).

The Court of Appeals affirmed, reaching only the so-called "misrepresentation" or "fraud" issue.

Judge Kalodner filed a strong dissent (App. 15-23) on the grounds: (1) the standard of proof required to prove fraudulent procurement of a patent is "clear, unequivocal and convincing evidence" not the "preponderance of the evidence" insisted upon as the test by the trial court; (2) the district court erred specifically in holding that (a) "*a specific intent to deceive is not necessary* to bar a patent when there is evidence of a deliberate withholding of material information" and (b) "even if the decision not to disclose was motivated *by nothing more than bad judgment* as to the materiality of the information, the patent must be rejected"; (3) the trial court had made no finding of fact that the Patent Office was misled and, indeed, that there was not a scintilla of evidence offered to that effect; and, (4) the findings of fact that the undisclosed material was of "critical dimension in the obtaining of the patent" and "that there was a 'deliberate withholding'" were clearly erroneous since they were arrived at by application of the erroneous preponderance of the evidence standard of proof.

The patent application which became the patent in suit was filed February 3, 1967, and as the third of a series of applications by Dr. Huffman.* The application claimed the

* The first application, filed in 1957, was replaced by the second, filed in 1961 as a continuation-in-part application, which included claims to the use as herbicides of a class of compounds, including 3,4-DCPA and 3,4-DCAA. This class had been discovered by Dr. Huffman to have unusual and valuable herbicidal activities as

single compound, 3',4'-dichloropropionanilide (3,4-DCPA for short), a newly discovered chemical compound whose utility lies in its high degree of herbicidal activity.*

In October, 1967, the Patent Office rejected the claim to 3,4-DCPA as being obvious under 35 U. S. C. § 103 in view of the presence in the prior art of an isomer (2,4-DCPA) and a homolog (3,4-DCAA).** In response, Monsanto's patent attorney filed an argument in which he called to the attention of the examiner publications identifying additional chemical compounds closely related to 3,4-DCPA, which the examiner had not cited, and urged the examiner to reconsider the patentability of the "invention as a whole***", *i.e.* its herbicidal properties as well as its structure. With the argument was included an affidavit by Dr. Robert Husted certifying test results as to herbicidal properties for the purpose of rebutting the *prima facie* obviousness of the claimed compound arising from the similar chemical structure of both related compounds cited

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(footnote continued)

compared with certain other closely related compounds which did not in fact have such properties. Because of an interference instituted by the Patent Office between that second application and an application of respondent, it is still pending. The third application was a division of (*i.e.*, was carved out of) the second application, but was restricted in disclosure and claimed the single compound, 3,4-DCPA.

* 3,4-DCPA, often referred to as propanil, is extensively used by rice growers. Properly applied, it kills many weeds without harming the rice.

** As stated by the Court of Appeals below:

"8. A homolog is a member of a series of compounds in which each member differs from the next member by a constant number of atoms.

9. Isomers are chemical compounds having the same molecular formula but different molecular structures." (App. 6.)

*** 35 U. S. C. § 103 directs an obviousness conclusion "if the *differences* between the subject matter sought to be patented and the prior art are such that the subject matter *as a whole* would have been obvious at the time the invention was made . . .". (emphasis added.)

by the Examiner and others noted by petitioner. Specifically, the Husted affidavit contained a table of 110 tests involving the effect of ten different compounds (*i.e.*, 3,4-DCPA, 3,4-DCAA, 2,4-DCPA, and seven others) applied at the same rate to eleven different kinds of plants.

The Husted affidavit was prepared by the Monsanto patent attorney from a report to him by Dr. Husted (DX-22) on the results of tests on a large number of different plants from different plant families. The ten different compounds (3,4-DCPA, 2,4-DCPA, 3,4-DCAA, and seven others) were applied at each of three different rates or dilutions to each plant under carefully controlled comparable conditions. The results were evaluated and rated on a scale of "0" (no herbicidal activity) up to 4 (total kill). From this mass of data (some 899 tests in all), the Monsanto attorney eliminated all tests at the lower application rates and further narrowed the plant selection to eleven plants in selecting and organizing the data for the affidavit presentation under Patent Office Rule 132.* Rice and wheat, included in the eleven plant species named in the affidavit, were not affected ("0" ratings) by 3,4-DCPA. The Husted affidavit demonstrated a high level of herbicidal effectiveness ("3" or "4") for 3,4-DCPA on the other plants** and little or no effectiveness for any of the nine other very closely related chemicals on the

* The great bulk of the data generated but not submitted to the Patent Office was at the dilute application rates, which gave phytotoxicity rates of "0", "1" and "2", considerably less than is required for herbicidal uses. In all, 864 of the 899 tests in the data before the attorney showed no or almost no toxicity.

** It may be helpful to appreciate that a plant is a "weed" or a "crop" depending upon the circumstances. The classical definition is that a weed is a plant growing where it is not wanted. Cotton, for example, was killed by 3,4-DCPA, as reported in the affidavit. When crops are rotated, last year's crop may be this year's weed, and the value of a particular chemical as a herbicide depends upon the farmer's needs.

same plants. The application was allowed in February, 1968, shortly after the amendment and affidavit were filed.

The trial court found that "the affidavit contains no affirmative misrepresentation and is accurate as far as it goes" (App. 61). The trial court concluded, however, that the absence from the affidavit of tests showing that both 3,4-DCPA and 3,4-DCAA killed pigweed was a deliberate effort to mislead. Pigweed was one of the plants tested by petitioner, but not reported in the Husted affidavit. Huffman had, however, discovered that 3,4-DCAA had some herbicidal activity and had in fact previously fully disclosed its effect on pigweed in the copending and cross-referenced second application. The trial court's conclusion of misrepresentation was filed as Finding of Fact No. 37 (App. 48-50) which concludes "These omissions were intentionally and deliberately made to mislead the Patent Office into believing that 3,4-DCPA had outstanding herbicidal value as compared to related compounds." The trial court at the same time held in view of all the facts that the discovery of 3,4-DCPA as a herbicide "was neither obvious nor predictable from the prior art" (App. 59). It is nowhere questioned that 3,4-DCPA is in fact the successful herbicide sought by rice growers and sold by the respondent, nor suggested that 3,4-DCAA enjoys any commercial favor as a herbicide.

The appellate court, in affirming the trial court's holding of misrepresentation based upon the absence from the Husted affidavit of data showing that 3,4-DCAA killed pigweed, relied heavily on an alleged "inconsistency" between the second and third applications.* The trial court, when

* The Court of Appeals plainly misunderstood the format and conventional relationship of the divisional [1967] application to its parent [1961] application (to which it was cross referenced) which disclosed the *class* of compounds. Both accurately recited the herbicidal efficiency of their respective subject matters compared to the same specific group of related compounds which had no

asked by respondent, had refused to find such an inconsistency. The Court of Appeals also accepted and emphasized a finding (No. 35, App. 48) by the trial court that in the 1967 application petitioner had said that "only" 3,4-DCPA had herbicidal activity and plainly placed considerable weight on it. The record is clear that no such statement was ever made. Petitioner was then, and still is, prosecuting the second application which discloses and claims the use as herbicides of a substantial *class* of compounds of which 3,4-DCPA and 3,4-DCAA are members. It is undisputed that Dr. Huffman discovered the herbicidal properties of this class.*

The Court of Appeals also viewed the fact that the total Husted test data not transmitted to the Patent Office as a failure of disclosure which made it "impossible for the Patent Office to assess Monsanto's application against the prevailing statutory criteria", but it did not review the trial court's interpretation of the criteria or their application to the facts.

The *only* evidence offered relative to the fraud or misrepresentation issue by the respondent were (1) certified copies of the Patent Office files of the three Huffman applications, (2) the original report from Dr. Husted to petitioner's attorney which contained the data from the entire 899 tests, and (3) the testimony of Mr. Cole the Monsanto attorney, a former patent examiner, who prosecuted the

(footnote continued)

herbicidal activity. See Monsanto's Petition for Rehearing (App. 24) and the Court of Appeals' subsequent correction of its opinion (App. 36-37).

* While certain members of that class, *e.g.*, 3,4-DCAA, were known by Dr. Huffman to be prior art compounds, there was no suggestion in the prior art that any member of that class had herbicidal properties. Both Huffman first and second applications claimed as permitted by 35 U. S. C. §101 the *use* of that class as herbicides but made no effort to claim the class of compounds per se.

third Huffman application and who was called as an adverse witness. Mr. Cole's testimony was neither challenged nor impeached. He testified what he understood to be the nature of the examiner's rejection, namely, that in the absence of a showing of unexpected properties (*i.e.*, the "differences" of Sec. 103), the new compound would be presumed to have all properties similar to the prior art structurally related compounds. He selected data which reflected these differences. He explained in substance that the available test data not included in the Husted affidavit was not considered material, *i.e.*, it did not demonstrate such "differences" as called for under Sec. 103 but rather the undisputed similarities between 3,4-DCPA and the others. He explained that he expected the examiner would continue to presume similarities in those areas where he did not submit data to the contrary. The record contains no evidence that the petitioner, the Examiner, or anyone else thought that the activity of 3,4-DCAA with respect to pigweed reflected unfavorably on either the patentability or the unique and outstanding qualities of 3,4-DCPA. The report to Mr. Cole by Dr. Husted (DX 22) from which the data for the Patent Office affidavit was obtained itself concluded "These data show that [3,4-DCPA] is unique in herbicidal activity . . .".

The theory of the trial court's decision that the data not submitted was material was its revival of a "structural obviousness" doctrine based upon its interpretation of *In re Henze*, 181 F. 2d 196 (CCPA 1950).* That case contains language to the effect that no patent can be granted where a homolog disclosed in the prior art actually

*The *Henze* case was decided before the enactment of 35 U. S. C. § 103 and well prior to the now leading precedent of the same court, *In re Papesch*, 315 F. 2d 381 (CCPA, 1963) on the patentability of compounds under 35 U. S. C. § 103. *Henze*, until the case below, had been long discredited and was recently specifically overruled as to the doctrine relied upon below in *In re Stemniski*, 444 F. 2d 581 (CCPA 1971).

possesses the new and unobvious property of the claimed compound whether or not that fact was known or obvious before the invention was made. The trial court acknowledged that "the cases subsequent to *Henze* are not easily reconcilable if reconcilable at all [with *Henze*]" but nevertheless held *Henze* to be controlling. It went on to conclude the subject matter of the patent was therefore unpatentable as "structurally obvious" and that "the purposes of the patent law will be adequately served if patents on compounds which are structurally obvious from the prior art are limited to method patents directed to the new and useful characteristic or property . . ." (App. 59).

A post-decision colloquy between Judge Masterson and petitioner's counsel in the course of a motion to delete a part of Finding 37 [that "omissions were intentionally and deliberately made to mislead the Patent Office"] further illuminates the basis of the district court opinion (App. 75-99). The district court there made very clear that it regarded the question of patentability of homologs of known formulae [*i.e.*, the obviousness issue under 35 U. S. C. § 103] to be the major issue which the Court of Appeals or this Court would have to decide (App. 76 and 92-93). The Court of Appeals was asked to review that issue, but unfortunately did not. The trial court also made it very clear that the "gloss" it put on the *Henze* decision was the basis of the materiality of the "omitted" data (App. 90 and 95-96), and that if the data were not material, "my finding of deliberate deceit is wrong" (App. 96).

Another suit on the Huffman patent filed simultaneously against other defendants in the Southern District of Texas (Houston) was tried before Judge Singleton. It involved precisely the same issues as the present case. The decision (App. 108) is reported as *Monsanto Company* v. *Dawson Chemical Co.*, 312 F. Supp. 452 (S. D. Tex. 1970). The

patent was held valid, infringed and enforceable. All holdings were diametrically opposite those of Judge Masterson. With Judge Masterson's decision before him, Judge Singleton also wrote:

> "The remaining contention on unclean hands relates not to what was said, but rather to what was not said. Defendants have not established that the withholding of this information was done with intent to deceive the Patent Office. They have similarly failed to prove the materiality of the information withheld, that the patent examiner would have rejected the application had he known of the matters said to be withheld as was true in Charles Pfizer & Co. v. FTC, *supra* [401 F. 2d 574 (6th Cir. 1968)]. To overcome the initial rejection by the patent examiner, it was necessary for plaintiffs to convince her that 3,4-DCPA had properties neither predictable from, nor in fact possessed by, 3, 4-DCAA. By the manner in which they went about this task, plaintiffs did nothing more than put their best foot forward. Defendant's contentions on this point are therefore without merit" (App. 127).*

The defendants in the Houston case appealed on all issues. The appeal had been briefed and argued when this Court's opinion in *Blonder-Tongue Laboratories, Inc.* v. *University of Illinois Foundation*, 402 U. S. 313 (1971) was handed down. The Fifth Circuit, without reaching any of the issues, reversed and remanded the case to the district court for consideration of an estoppel defense based upon the decision in Philadelphia by Judge Masterson and pursuant to the rule in *Blonder-Tongue*. This Court denied certiorari on March 6, 1972, ... U. S. ....., 173 USPQ 1 (1972) (No. 71-787).

As the litigation now stands, both courts of appeals to whom the issue has been briefed have refused to resolve

* A fair inquiry in such a situation—where one district judge and one appellate judge *strongly* reject any charge of wrongdoing—is whether on that basis alone the determination of inequitable conduct can be adhered to as "clear and certain."

the critical issue of obviousness under 35 U. S. C. § 103, which issue governs the determination of materiality of the data in question and which concept of materiality in turn converted an attorney's exercise of judgment as to materiality into "deliberate misrepresentation". To complete the circle, that same "misrepresentation" has been held to be unclean hands even if the data not submitted was immaterial.

REASONS FOR GRANTING THE WRIT.

A. The "Fraud on the Patent Office" Defense Urgently Needs Authoritative Definition.

The erroneous precedents created by the lower courts here, unless promptly corrected, are likely to upset whatever prospects exist for orderly development of the law of fraud and unclean hands in patent procurement as applied to workaday situations. Without this Court's guidance now, extensive and unnecessary work for reviewing courts seems sure to result. For example:

1) Since this Court's decision in *Walker Process Equipment, Inc.* v. *Food Machinery & Chemical Co.*, 382 U. S. 172 (1965), it has become commonplace in patent infringement suits to include, along with "boiler-plate" statutory defenses, an affirmative defense or counterclaim sounding in fraud or unclean hands. *Walker* held that a patent *obtained* by fraud—given proof of the remaining elements of an antitrust violation—could result in an award of treble damages as well as patent invalidity. While this Court in *Walker* did not determine what constituted fraud in the procurement of a patent, it clearly warned prospective litigants that it was dealing "only with a special class of patents, *i.e.*, those procured by intentional fraud" (382 U. S. at 176) and that "an honest mistake" (382 U. S. at 177) was a complete defense to an antitrust count.

Nevertheless, reckless charges of fraud and unclean hands have proliferated.* This petition presents the Court with an opportunity to alleviate the post-*Walker* burden on the courts by stating that neither a charge of fraud or of unclean hands—whether or not it be accompanied by an antitrust count—can be based on an honest mistake of judgment by an attorney serving his client.

2) This Court's decision in *Precision Instrument Mfg. Co.* v. *Automotive Maintenance Machinery Co.*, 324 U. S. 806 (1945) and particularly its statement that:

> "Those who have applications pending with the Patent Office or who are parties to Patent Office proceedings have an uncompromising duty to report to it all facts concerning possible fraud or inequitableness underlying the applications in issue." (324 U. S. at 818)

have, petitioner believes, been prejudicially misapplied in an ever increasing number of decisions**, in which patents

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* From the *Historical Review of Fraud in Patent Procurement: The Standards and Procedures for Doing Business Before the Patent Office* by S. W. William Cochrane, then Deputy Solicitor (now Solicitor) of the United States Patent Office, 52 J. Pat. Off. Soc'y., 71, 75 (1970):

> "A cursory survey of decisions of the Federal courts reported for the years 1960 through 1968 in which the issue of fraud on the Patent Office was directly pleaded by defendants shows that about forty (40) decisions expressly discuss and decide the fraud issue. It is significant that 30 of those 40 cases came after 1965 when the *Walker* case was decided. Since the seriousness of a charge of fraud carries with it a heavy burden of proof by clear and convincing evidence, the instances in which patents have been held invalid or unenforceable on that ground have been relatively few."

Judge Duffy of the Court of Appeals for the Seventh Circuit in *Baxter Laboratories Inc.* v. *Corn Products Co.*, 394 F. 2d 892 (7th Cir. 1968) reflected the general criticism by the bar and bench in referring to this type of "serious charge which is found too often in patent litigation." (394 F. 2d at 896.)

** In addition to the Third Circuit's decision in the instant case, *Beckman Instruments, Inc.* v. *Chemtronics, Inc.*, 428 F. 2d 555, 565 (5th Cir. 1970); *Acme Precision Products, Inc.* v. *American*

have been held invalid or unenforceable on the basis of fraud or unclean hands. As Judge Kalodner pointed out in his dissent below,

> "This, too, must be said with respect to the majority's reliance on *Precision Instrument Mfg. Co.* v. *Automotive Maintenance Machinery Co.*, 324 U. S. 806 (1945). There the evidence conclusively established that the patent in suit had been obtained by fraud intentionally concealed from the Patent Office with intent to deceive. *Precision*, accordingly is inapposite on its facts." (App. 23.)

The *Precision* opinion, which did not have to be concerned with defining fraud, required the fact of fraud to be reported to the Patent Office. Most emphatically, it is not a prejudgment that the "failure" of patent applicants or their attorneys to burden the Patent Office with all they know, material or otherwise, itself constitutes fraud.

Two other decisions by this Court often cited with *Precision Instrument* are *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U. S. 238 (1944) and *Kingsland* v. *Dorsey*, 338 U. S. 318 (1949). All three exemplify thoroughly reprehensible acts which should be reported to the Patent Office if discovered (but which most obviously should never be committed in the first place). In contrast, many workaday situations in prosecution before the Patent Office call for a skilled judgment decision by an attorney familiar with the patent law, the technological facts involved, and the intricacies of Patent Office procedure. Guidance more helpful

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(footnote continued)

Allays Corp., 422 F. 2d 1395, 1400 (8th Cir. 1970); *Monolith Portland Midwest Co.* v. *Kaiser Aluminum & Chem. Corp.*, 407 F. 2d 288, 294 (9th Cir. 1969); *SCM Corp.* v. *Radio Corporation of America*, 318 F. Supp. 433, 449 (S. D. N. Y. 1970).

than a vague overhanging threat is sorely needed if attorneys are not to be forced to abdicate their necessary and useful function of making judgment decisions in presentations to the Patent Office.[9]

[9] The legal commentators seem to be in agreement on the absence of guidelines for resolving workaday problems in this area:

"The most authoritative source for determining what conduct the Supreme Court intended to be included within the meaning of fraud should be the opinions in the *Hazel-Atlas* and *Precision Instrument* cases, but neither opinion discusses in detail what conduct before the Patent Office is fraudulent. In the *Hazel-Atlas* case the term fraud was used as if it were established, without a discussion of the facts which gave rise to the finding. Further, it was not indicated whether the conduct necessary to vitiate a patent under the new defense should be sufficient to establish fraud as the term is commonly defined in other areas of the law, or whether the conduct must meet only the doctrine of unclean hands found in *Keystone Driller v. General Excavating* [footnote omitted]. Although the opinion in the *Precision Instrument* case did indicate that knowledge is an element of fraud, there was still no definitive standard that could be used to evaluate a patentee's misconduct before the Patent Office." Cullen & Vickers, *Fraud in the Procurement of a Patent*, 29 GEO. WASH. L. REV. 110, 124-125 (1960).

"Moreover, there is still no clear definition of the activities constituting fraud in the procurement of a patent nor is it clear where or how far the *Walker Process* doctrine will be extended. From the cases decided after *Walker Process*, it can be concluded that a great deal of confusion still remains. The result of such confusion is to further complicate the difficulties a lawyer faces in making the accurate predictions required to properly advise his clients." *Patents, Fraud and the Antitrust Laws*, 37 GEO. WASH. L. REV. 168, 176 (1968).

"If this uncertainty in the law makes the patent solicitor uneasy, it is completely bewildering to the litigating lawyer. In an area where there is some law for everybody, the accused infringer's trial counsel often feels compelled to shoot for a treble damage award despite the tenuousness of the alleged misrepresentation indulged by the patentee.

"Until some authoritative pronouncement is made or a judicial consensus is reached as to what constitutes culpable fraud in the Patent Office, it would be presumptuous to propose guidelines for the solicitor in a paper of this nature." Lynch, *Defensive and Offensive Aspects of the Law of Fraudulent Procurement*, 9 SOUTHWEST LEGAL FOUNDATION PATENT LAW ANNUAL 83, 84 (1971).

3) This is an important, widely observed case.* It has gone further than any other in eliminating intent to defraud as an element for conduct to be penalized as fraudulent, and in glossing over the requirements of proof of whatever elements of fraud remain. Petitioner's patent rights have already been drastically affected by this Court's decision in *Blonder-Tongue Laboratories, Inc.* v. *Univ. of Illinois Foundation*, 402 U. S. 313 (1971). The patent has been through almost simultaneous trials in district courts in two circuits—with diametrically opposite results on this issue and every other issue. The January 12, 1972 opinion of the Third Circuit considered "only the mispresentation issue", made a mistaken application of what it thought was the "*Precision* test", and affirmed, stating that "Monsanto's failure to disclose amounted to misrepresentation transgressing equitable standards of conduct owed the public by the applicant in return for its monopoly" (App. 14). It reached such a conclusion, however, *without considering the basic issues of patentability, materiality, intent, and whether the Patent Office was actually misled.* Judge Kalodners' vigorous dissent scored the district court's acknowledged application of an improper "preponderance of the

* For example, in his March 14, 1972 address to the Patent, Trademark & Copyright Section, the Virginia State Bar, The Honorable Commissioner of Patents, Robert Gottschalk, noted that "Many courts are holding patents invalid or unenforceable" for "fraud on the Patent Office" and that "This is a matter of concern to us all." As an example, he referred to the type of situation where

> ". . . [A]n applicant presents data or other evidence tending to support patentability, but fails to call attention to additional data which do not help his case and may run counter to it. Even if the omission is not specifically intended to deceive, the patent may be held unenforceable on the ground that the patentee's conduct was lacking in candor (as witness the recent Third Circuit decision in *Monsanto* v. *Rohm & Haas*)."

evidence" test and particularized the failure of evidence supportive of either fraud or unclean hands.* The cases below are both important precedents and unfinished business.

4) This Court has not reviewed the law applicable to the patent prosecution fact situations arising as "fraud on the Patent Office" issues in infringement suits since 1928 in *Corona Cord Tire Co.* v. *Dovan Chemical Corp.*, 276 U. S. 358, 373, 374 (1928). There the Court found misrepresentations in affidavits filed to secure the allowance of the patent "perhaps reckless", but it did not find the truth of the representations "essentially material" to the issue of the patent. Materiality was then the key and still is necessary before those courts which require the party alleging fraud to show that, but for the misrepresentation, the patent would not have issued. *Corona* v. *Dovan* was not discussed or cited in any of this Court's subsequent opinions dealing with fraud on the Patent Office. The case below is the first in which the assumed materiality of information not furnished to the Patent Office would make inequitable intent unnecessary to the forfeiture of a patent. And it is marked by a failure of the Court of Appeals to even address the issue of materiality as it arose in the trial court's theory of obviousness considerations under 35 U. S. C. § 103.

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* ". . . here there was not a scintilla of evidence that the Patent Office was misled into issuing the patent by the conduct condemned by the District Court. Indeed, the District Court did not make any *finding of fact* that the Patent Office was misled." (Emphasis Judge Kalodner's.)

* * *

"The record below fails to disclose any evidence that the facts withheld from the Patent Office were 'material' to the granting of the patent."

* * *

"The record further contains no factual evidence that there was a 'deliberate withholding' of information. There was, however, affirmative testimony by the then counsel for the patent applicant that the omitted data was not included in the Husted affidavit because in his opinion it was not material. This testimony was not challenged nor was it impeached." (App. 21, 22.)

5) As with so many legal problems, courts and lawyers become so deeply involved in their analysis of specific facts, cases and statutes that there is a failure to step back and take a broad look at the matter before them. Here a basic question is—or at least should be—whether 3,4-DCPA is in fact a novel chemical compound having sufficiently unique and unexpected herbicidal properties to entitle Monsanto to a patent under 35 U. S. C. § 103. If it is, then it is difficult if not impossible to see how it can be said that the Patent Office was misled into granting the patent. Certainly it is not controverted that 3,4-DCPA is the leading herbicide employed in growing rice. Certainly the respondent Rohm & Haas—which tried and lost in an attempt to get a patent on the very same compound—is in no position to deny the compound's unique and valuable properties. Certainly two large companies, such as the parties here, would not expend such effort and money both in the courts and in the Patent Office relative to this particular compound and its method of use if it were not a unique and valuable product. Given the uncontroverted facts that the compound is novel, that the Husted affidavit is "accurate as far as it goes", and that such affidavit demonstrates remarkable advantages for 3,4-DCPA over its closest chemical cousins, one must ask himself is it even logical to say that the patent was issued because the Patent Office was misled? It was the courts below which were misled—and not by petitioner.

B. The Abandonment Below of the "Clear, Unequivocal and Convincing Evidence" Standard Is a Serious Erosion of the Judicial Process. (Question 1)

Nothing could be more clearly settled than that the Court below should have adhered to the "clear, unequivocal, and convincing" standard of proof of fraud. No court has heretofore held that the burden of proving fraudulent

conduct or unclean hands in procurement of a patent was merely proof by "preponderance of the evidence." The trial court below made it clear that it had invalidated the patent for fraud on just that basis:

> "The Court: Look, if this were a criminal case, Mr. Leydig [Monsanto's counsel], it is very possible as to the intention to deceive *a jury might have a reasonable doubt under all of the evidence in the case.*
>
> "But it is not a criminal case. It is a civil case. *The burden is the preponderance of the evidence*, and I have found that *it is more probable than not.*
>
> "Mr. Leydig: It is more than that, Your Honor.
>
> "The Court: *That is all it is.*" (App. 83-84, emphasis supplied.)

Erosion of the standard of proof is erosion of the law. This Court's restatement of the standard of proof would be a logical starting point in regulating the sport of charging fraud without substantiation.

The standard of proof is not a matter of words. In our jurisprudence, the development of the law of fraud has been coupled to a high standard of proof, usually expressed as "clear, unequivocal, and convincing evidence." Any failure to adhere to the higher standard masks a departure, intended or otherwise, in the law of fraud. The higher standard, for example, makes it unnecessary for the party accused of fraud to come forward with defensive evidence, and for the trial court to hear it, if the accuser does not present sufficiently conclusive evidence of fraud. Where inferences are often drawn from circumstances, the higher standard helps prevent a merely possible inference from being promoted to proof. For example, the courts below even twisted petitioner's attorney's acknowledgement that certain of the test data had been omitted consciously from the affidavit into an admission of intentional misrepresentation (App. 15 and 102-103).

Twisting conscious judgment into deliberate misrepresentation is a semantic trick. It converts the attorney's necessary and useful exercise of good faith judgment in selecting facts to present to the Patent Office into intentional deceit. It assumes an attorney's discriminating elimination of the immaterial to be unfair "close-cropping." Under the appropriate standard of proof—and absent a definition of fraud which changes such an exercise of judgment by an attorney into proof of fraud or unclean hands—deception simply was not proven in this case.

Judge Kalodner's dissent below went to the heart of the matter. But the majority opinion merely seized upon the formal general conclusions of the district court that patent invalidity was proved by clear and convincing evidence (footnote 14, App. 14) to show that the trial court did what it plainly had not done. The majority in effect substituted its own willingness to be misled for proof that the applicant attempted to mislead or that the Patent Office was misled.

The requirement that allegations sounding in fraud or other inequitable conduct be proven by a standard of clear, unequivocal, and convincing evidence is no stranger to the civil law. See, by way of example, *Woodby* v. *Immigration and Naturalization Service*, 385 U. S. 276, 285, (1966). This is the burden of proof on the party alleging fraudulent procurement of a patent. *United States* v. *American Bell Telephone Co.*, 167 U. S. 224, 251 (1897). This Court in reviewing cases since 1897 in which the fraud was clear and clearly proven or where the issue was defined by the pleadings had not suggested that the burden of proof has lessened. The cost to the fraudulent wrongdoer went up in *Walker*, but the burden of proving fraud did not go down.

The Circuit Courts of Appeal have required nothing less than the clear, unequivocal and convincing evidence

test or its verbal equivalent as the quantum of proof in patent fraud or unclean hands defenses. Nothing in the cases suggests that busy courts having large numbers of patent cases tolerate short cuts in this respect. In *Barr Rubber Products Co.* v. *Sun Rubber Co.*, 425 F. 2d 1114 (2d Cir. 1970), the Court of Appeals for the Second Circuit not only held that the district court had erred because it did not apply the clear and convincing evidence test, but also expressed concern because the trial court did not also make clear the quantum of proof required. The Court of Appeals of the Seventh Circuit has repeatedly emphasized that a finding that a patent was procured by fraud or unclean hands must be based on 'clear, unequivocal and convincing evidence.'' as, for example, in *Scott Paper Co.* v. *Fort Howard Paper Co.*, 432 F. 2d 1198 (7th Cir. 1970). The first—and thus far the only—case in which the Court of Customs and Patent Appeals has reviewed the disposition by the Patent Office of a charge of fraudulent misconduct by a patent applicant is *Norton* v. *Curtiss*, 433 F. 2d 779, 797 (CCPA 1970). There the court held that "The standard has been and still is that proof of fraud must be clear and convincing."

The district courts in the Third Circuit have heretofore been affirmed in their insistence upon the usual standard of proof. Thus, in *Corning Glass Works* v. *Anchor Hocking Glass Corp.*, 253 F. Supp. 461 (D. Del. 1966), *rev'd on other grounds*, 374 F. 2d 473 (3d. Cir. 1967), *cert. denied* 389 U. S. 826 (1967), the trial court specifically held that the standard of proof is not a preponderance of the evidence and that intentional misrepresentation must be proved to a reasonable degree of certainty. In *Baldwin-Lima-Hamilton Corp.* v. *Tatnall Measuring Systems Co.*, 169 F. Supp. 1 (E. D. Pa. 1958), *aff'd*, 268 F. 2d 395 (3d Cir. 1959), the trial court held "that the law is settled that the proof of fraud must be clear, unequivocal and con-

vincing, and that a mere preponderance of evidence which leaves the issue in doubt may not properly be a basis for a finding of fraud." But if it makes no difference to a court of appeals whether or not the standard of proof is announced and applied, that standard may as well be forgotten.

Nothing in those cases where the standard of proof was applied to reject the fraud contention suggests that the flimsy inferences indulged in below would have met the proper standard. Relaxing the requirement of proof as was done here is a dangerous shortcut. It has nothing to do with "strict" or "liberal" attitudes toward fraud or duties of patent applicants; the law defining the duties and the elements of fraud must do that.

C. The Patent System Will Surely Work Less Well if Attorneys Are Penalized for Exercising Judgment. (Questions 2 and 3)

The second and third Questions Presented are posed in terms of an attorney serving his client. Patent applications are seldom prosecuted by applicants *pro se*. The much vaunted complexities and uncertainties of patent law and practice are all too real. The decision as to what is said to the Patent Office is usually, if not always, an attorney's. His function is not to exculpate improper acts of his client nor to perform them for him. If wrongdoing by the attorney or through the attorney be proven, the axe must fall. But these Questions need this Court's consideration because the Court below and the trial court in improperly resolving the charges of fraud and unclean hands have imposed an unfair, intolerable, and unrealistic burden on patent attorneys and their clients, while at the same time relieving the accused infringer of the burden of proving the invalidating fraud or inequitable conduct by clear and convincing evidence.

The trial court in this case had no evidence whatever to support its finding of (1) *intent to mispresent,* or (2) *materiality* of the omitted information. It *inferred* intent to deceive from the attorney's testimony at trial that information was intentionally left out because he did not consider it material to the issue of patentability and it *assumed* its absence misled the Patent Office. In effect, the district court below would penalize as intentional misrepresentation any "failure" of an applicant to volunteer any information unless he can prove such is not even marginally material to the issue before the Patent Office:

> ". . . [W]e hold that even if Monsanto did not intend to deceive the Patent Office the fact that it intentionally withheld facts which were material to the decision whether it was entitled to a patent is sufficient to bar the issuance of a patent to it." (App. 102)
>
> * * *
>
> ". . . [E]ven if the decision not to disclose was motivated by nothing more than bad judgment as to materiality of the information, the patent must still be rejected. We hold that specific intent to deceive is not necessary to bar a patent when there is evidence of a deliberate withholding of material information. Of course, if it is found that the facts withheld were not even marginally material to the issue before the Patent Office, then our decision on this precise issue would be different." (App. 103)

Even if the court had not elected to say what it thought in so many words, what it actually did comes out to the same place. Wrongful or inequitable *intent* has been eliminated as an element of fraud. *Materiality* is enough, and if the materiality is not fully understood by the court, the simplistic rule "where the materiality of facts is in question, to resolve all doubts in favor of disclosure" (App. 65) resolves all doubts about fraud in favor of the accuser who stands to benefit from destruction of the patent property.

Petitioner's attorney here did not elect to file all of the data which the petitioner had generated but selected that data which he thought material. If the novel precedent below is allowed to stand, a lawyer is guilty of intentional fraud unless he prove himself innocent by persuading a court that information "omitted" in a response was "not even marginally material."

Under such a rationale how can any applicant or attorney henceforth prosecute an application and not be guilty of the same wrong of which petitioner has thus far been convicted? The only way, it would seem clear, outside of studied ignorance of all facts, is to make no judgments and inundate the Patent Office with every known fact. The result may be freedom from fraud or unclean hands under the unrealistic reasoning of the court below, but, petitioner most seriously suggests, at the price of a complete breakdown of the examining procedure of the Patent Office.

The starting point in resolving the workaday problems in the Patent Office is the high duty of care on all involved—applicants, attorneys, the Patent Office, the courts, and Congress—who accept responsibility in making the complicated system work. The attorney, in particular, must not be inhibited from making good faith judgments under the existing law as to what is material to the factual and legal issues at hand in dealing with the Patent Office. Conflicting decisions* interpreting the patent statutes may make less than clear just what is or isn't material to a patent decision, and he will have to use his best judgment under difficult conditions.

* In the case below, the trial court could not reconcile CCPA's *In re Papesch*, 315 F. 2d 381 (CCPA 1963) decision under 35 U. S. C. § 103 which was before petitioner when the patent was prosecuted with the CCPA's *In re Henze* 181 F. 2d 196 (CCPA 1950) decision reached prior to the enactment of 35 U. S. C. § 103. By choosing to follow the discredited decision, the trial court created a new basis in 1970 of materiality (and thus of fraud) in 1967.

Courts can recognize from experience in judicial administration what the attorneys practicing before the Patent Office are required to realize—that feeding redundant or immaterial information into the highly structured examination process is more hindrance than help. To pretend otherwise is to penalize those who would rely on the Patent System and ultimately those who are accustomed to receiving the benefits of disclosed inventions under the Patent System. The courts below were led to condemn the applicant because, on the one hand, the applicant did not file all it knew at a particular stage of a particular proceeding, and on the other hand, because the courts did not believe information filed in the Patent Office would be intelligently utilized. The courts had no cause—and certainly no evidence—for either position.

The Patent Office, in fact, has organized procedures for making sure that related matters in different files are properly handled and that the facts already before the Patent Office are acted upon. The Patent Office would not benefit by having everything possibly relevant to a matter filed with each submission in each case. The total facts show that all the material facts were before the Patent Office in those files where they were material, and that the conscientious attorney here involved went out of his way to make personally sure that the Examiner involved was aware of what had occurred in related proceedings and that the Patent Office routines served their purposes.

Moreover, the courts below, for example, were themselves misled into believing that the petitioner had told the Patent Office that "only" 3,4-DCPA of a certain group of related compounds had any herbicidal activity. This fabrication* was the basis for the charge of inconsistency which so troubled the Court of Appeals. The petitioner was then and still is prosecuting the second (1961) application to

* Petitioner never at any time made any such statement to the Patent Office.

the use of that group of compounds as herbicides. The courts below simply failed to understand that when an applicant has two related (and appropriately cross referenced) applications pending, that the Patent Office will read *both* of them (as it is required to do) and will know that the patent applicant—as his oaths state—believes he does indeed have separate and distinct inventions. What was not understood was condemned.

If applicants and their attorneys are to be scapegoats for exercise of judgment in a difficult legal area where that exercise is badly needed, the fraud being practised is on the patent system.

D. The Vital Importance of Adherence to the Law in Validity Determinations Has Been Ignored. (Question 4)

Underlying any determination of materiality of evidence under 35 U. S. C. § 103 must be a correct understanding of how the patent statutes apply to the facts, and how the Patent Office must function in performing its statutory duties.

The ultimate patentability issue is whether the new and useful invention meets the third condition—unobviousness—under 35 U. S. C. § 103. The procedure for determining obviousness was set forth by this Court in *Graham* v. *John Deere Co.*, 383 U. S. 1, 17 (1965) and is essentially the same in the Patent Office as in the courts. The first two steps of that procedure (determination of the scope and content of the prior art, and ascertainment of the *differences* between the prior art and the claims at issue) results in a rejection for lack of novelty under 35 U. S. C. § 102 if there are no differences under the second step. If there are differences, the *Graham* v. *Deere* inquiry proceeds to the third step and "Against this background, the obviousness or non-obviousness of the subject matter is determined." It is

not an easy determination which this Court has required of the courts below, but it is important to the public interest that it be performed correctly.

When the examiner took the position, unsupported by any evidence, that 3,4-DCPA was obvious in view of the fact that known prior compounds had closely related chemical structures that was her invitation to the applicant to come forward with whatever evidence he had to establish the "differences" required under Sec. 103 and set the stage for the final step of *Graham* determination.

At this point it is useful to review briefly some of the facts of research to which the law must be applied. The formula, as conventional nomenclature for the structure of a chemical compound, not only identifies the compound, but sometimes offers a useful starting point in research. Thus, if a certain compound has unusual and valuable properties that make it useful as a herbicide, research directed to an improved herbicide may proceed by (1) determining the structure of the known compound, and then (2) formulating and testing closely related structures. The discovery* of a new herbicide this way is unlikely to meet the unobviousness condition of Sec. 103. On the other hand, patentability of valuable new herbicides is not generally foreclosed, of course, except to the extent that the herbicide must have been unobvious to a person skilled in the herbicide art at the time the invention (or discovery) was made.** If structural analysis shows the new compound to be very close in structure to a prior art compound not previously known or suspected to have any connection whatever with

* "Discovery" and "invention" are to the same effect (35 U. S. C. § 100(a)) and neither term is employed here to connote patentability or lack of it, pending determination of the statutory conditions of novelty, utility, and unobviousness.

** The mechanics of making the discovery are not an issue. "Patentability shall not be negatived by the manner in which the invention was made," second sentence of 35 U. S. C. § 103.

herbicidal activity, it would be a hindsight fiction, at best, to say that the new herbicide was obvious in view of the prior art compound.

The applicant's attorney, in response to the rejection, called the examiner's attention to the striking herbicidal effectiveness of 3,4-DCPA and provided corroborative test data. The formula, as the thumbprint of the new compound, was only slightly different from the formulas of the prior art. But the compound as a whole which it identified, referring particularly to its commercially valuable property as a herbicide, was unobvious under the leading precedent, *In re Papesch*, 315 F. 2d 381 (CCPA 1963). *Papesch* made it clear that under 35 U. S. C. § 103, "If that which appears, at first blush, to be obvious though new is shown to be unobvious, then evidence prevails over surmise or unsupported contention and a rejection based on obviousness must fail" (315 F. 2d at 386, 387). Whether the petitioner submitted one test or one million was up to him, since he had the burden of establishing such *differences* under Sec. 103 as would satisfy the Examiner that structural similarities were an inadequate basis for maintaining the rejection. And it is important to remember that under § 103 and under *Graham*, the fact that 3,4-DCAA killed pigweed neither detracted from 3,4-DCPA's unique and valuable properties nor constituted prior art data which the Patent Office was legally entitled to turn around and use against petitioner.

Misconceptions in the case below as to what was and was not material to patentability arose because the trial court mistakenly believed that petitioner was entitled only to a process claim on the use of the new compound 3,4-DCPA as a herbicide. The trial court relied mainly upon the pre-§ 103 and pre-*Papesch* precedent, *In re Heuze*, *supra*. In *Heuze* the CCPA had affirmed a Patent Office position

that the applicant must show not only unexpected properties of his new compound *not known* (by the prior art) *to be possessed* by similarly-structured prior art compounds, but also unexpected properties *in fact not possessed* by the prior art similarly structured compounds. Under that view, discoveries made in the light of an earlier discovery would invalidate—for obviousness!—the patent to the earlier discovery. Moreover if it be improperly presumed and erroneously assumed that the Patent Office was not aware of what the applicant had been telling it in his previous applications, a case could be made out that someone, somewhere was confused, but not that there would have been less confusion if the applicant had dumped unselected data on the Patent Office.

This is not intended to be a full discussion of cases dealing with the determination of the materiality of evidence under Sec. 103. The point is that the careful determination prescribed in *Graham* v. *John Deere Co.* was never made. Instead the law of patentability under Sec. 103 was newly interpreted by the district court in such a way as to make material to the Sec. 103 determination some facts which petitioner submits were not material under the law as it existed in 1967 and should not be now. The newly assumed materiality has converted a good faith judgment by the attorney in 1967 into deceit in 1970. From the standpoint of concern for the orderly development of the statutory law, the haste to confirm a basis for materiality used in a fraud finding leaves unreviewed a highly unsettling departure in the law of obviousness under 35 U. S. C. § 103 as it applies to patentability of new compounds.

Again, without attempting to fully argue the unreviewed Sec. 103 decision, it is important to appreciate that the revival and extension of the CCPA's 1950 unrealistic *Henze* dicta by Judge Masterson flies in the face not only of the CCPA's 1963 decision in *Papesch*, but also its later cases.

including *In re Ruschig*, 343 F. 2d 965 (CCPA 1965) and *In re Stemniski*, 444 F. 2d 581 (CCPA 1971), which latter decision finally expressly overruled that portion of *Henze* relied upon below. It is clear that the court below, in paying lip service to *Commissioner of Patents* v. *Deutsche Gold-und-Silber* S, 397 F. 2d 656 (D. C. Cir. 1968),* ignored its approval of the *Papesch* precedent and its rejection of the broad "structural obviousness" doctrine (397 F. 2d at 659-664) which would undermine 35 U. S. C. § 103 and the *Graham* approach.

This Court has made it very clear in *Brenner* v. *Manson*, 383 U. S. 519 (1966) that compounds without known practical uses have not yet benefited the public in the useful art sense. Surely, it makes no greater sense to permit a district court to erect a destructive, non-statutory, patent-defeating test for obviousness having no foundation in practical reality or in the purposes of the patent law. Under the circumstances, the election of the Court of Appeals not to review the obviousness determination is itself a dangerous precedent. The abdication of responsibility to the public, as well as to the petitioner, deserves correction by this Court.

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*The decision in that leading case on the patentability of chemical compounds was written by Judge (now Chief Justice) Burger and affirmed the trial court judgment reported at 251 F. Supp. 624 (D. D. C. 1966). That trial court opinion, as well as the important *Papesch* and *Ruschig* precedents reflected the state of the law when the patent in suit was being prosecuted and all denied the doctrines the trial court below relied upon in rehabilitating *Henze* with the "gloss" that it put in *Henze*.

CONCLUSION.

The petition for writ of certiorari should be granted so that this Court may resolve the important questions here presented.

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Opinion of the Court of Appeals.

UNITED STATES COURT OF APPEALS
For the Third Circuit.

No. 19,132

MONSANTO COMPANY,

Appellant,

vs.

ROHM & HAAS COMPANY,

Appellee.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA.

Argued May 3, 1971

Before KALODNER, VAN DUSEN and
ALDISERT, *Circuit Judges.*

OPINION OF THE COURT.

(Filed January 12, 1972.)

ALDISERT, *Circuit Judge.*

Monsanto Company appeals from a judgment declaring invalid and unenforceable its U. S. Patent No. 3,382,280, known as the Huffman patent, issued May 7, 1968.[1] The

1. Extracts from the patent:

3',4'-DICHLOROPROPIONANILIDE, Clarence W. Huffman, Glenview, Ill., assignor to Monsanto Company, St. Louis, Mo., a corporation of Delaware. Abstract of the Disclosure:

action arose in an infringement proceeding Monsanto brought against Rohm and Haas Company, in which the defendant counterclaimed for a declaratory judgment of invalidity and for an injunction and damages for unfair competitive acts against defendant's allegedly infringing product.[2]

Preliminarily, we observe that Rohm and Haas, as a defendant in the proceedings below, had the right to challenge the validity of the patent on the ground that it was obtained by fraudulent misrepresentation.[3] In *Walker*

(Footnote 1—continued.)

3',4'-dichloropropionanilide is a new compound which has outstanding herbicidal properties.

. . . (Col. 1)

The herbicidal efficiency of 3,4-DCPA is surprising, for related compounds possess little or no herbicidal efficiency. When tested as described above, aqueous emulsions of a random group of such related compounds are found to possess little or no herbicidal activity. Some of the compounds are set forth below:

3'-chloroisobutyranilide
3'-chloroacetanilide
4'-bromo-2'-phenylacetanilide
2',4'-dichloropropionanilide
2',4'-dichloroisobutyranilide
2',4',5'-trichloroisobutyranilide
3',4'-dichlorolauranilide
2',4'-dimethylpropionanilide
N-methylacetanilide
N-n-butylacetanilide
p-chloracetylacetanilide
2',4'-dimethylpropionanilide
2-chloro-2',4'-dimethylpropionanilide

2. District court jurisdiction is based on 35 U. S. C. § 271, 28 U. S. C. §§ 1338 and 1400. Proceedings in other aspects of defendant's counterclaim were deferred until appellate review of the declaratory judgment duly certified by the district court under Fed. R. Civ. Pro. 54(b).

3. The right to such an action has had an oblique history. Though the patent acts of 1790 (Act of 1790, § 5, 1 Stat. 109) and 1793 (Act of 1793, § 10, 1 Stat. 318) expressly granted a private party the right, upon allegations of fraud, to petition the district court for an order requiring the patentee to show cause why his letters patent should not be repealed, the omission of the provision in the 1836 Act (Act of 1836, 5 Stat. 117) prompted

Precise v. *Food Machinery*, 382 U. S. 172, 176 (1965), the Court said:

> Under the decisions of this Court a person sued for infringement may challenge the validity of the patent on various grounds, including fraudulent procurement. *E.g., Precision Instrument Mfg.* v. *Automotive Maintenance Machinery Co.*, 324 U. S. 806 (1945); *Hazel-Atlas Co.* v. *Hartford-Empire Co.*, 322 U. S. 238 (1944); *Keystone Driller Co.* v. *General Excavator Co.*, 290 U. S. 240 (1933). In fact, one need not await the filing of a threatened suit by the patentee; the validity of the

(Footnote 3—continued.)

the Supreme Court to conclude in 1871 that "no one but the government, either in its own name or the name of its appropriate officer can institute judicial proceedings for the purpose of vacating or rescinding the patent which the government has issued to an individual . . . [except in those cases asserting the statutory defenses to private infringement actions permitted by the 1839 Act]." *Mowry* v. *Whitney*, 81 U. S. 434 (1871). The right of the government to bring an action to annul a patent was firmly established in *United States* v. *Bell Tel. Co.*, 128 U. S. 315 (1888), and the right was deemed exclusive *United States* v. *American Bell Tel. Co.*, 159 U. S. 548, 555 (1895); *Briggs* v. *United Shoe Machinery*, 239 U. S. 48, 50 (1915); *Carson Inv. Co.* v. *Anaconda Copper Mining Co.*, 26 F. 2d 651, 660 (9th Cir. 1928).

Since 1915, however, our research discloses no Supreme Court case holding that the right to seek patent nullification has been expressly limited to the United States. Of course, a patentee guilty of obtaining a patent by fraudulent conduct could be denied equitable relief when bringing an infringement action, thus rendering the patent unenforceable against a defendant who could prove unclean hands. *Precision Instrument, supra; Hazel Atlas Co.* v. *Hartford-Empire Co., supra.* (Implicit in Justice Roberts' dissent is the recognition that only the United States can seek actual nullification. 322 U. S. at 252; *Keystone Driller, supra. Cf. Hazeltine Research* v. *Avco Mfg. Corp.*, 227 F. 2d 137, 146 (7th Cir. 1955); *Vortex Mfg. Co.* v. *Pig-Rite Contracting Co.*, 31 F. 2d 302, 310 (D. Md. 1929); *Alliance Securities Co.* v. *J. A. Mohr & Son*, 14 F. 2d 793, 798 (N. D. Cal. 1926).

Thus, it may still be true that only the government may seek actual nullification or cancellation of a patent, though the boundaries of its rights in this area are not yet firmly drawn. See *United States* v. *Glaxo Group Limited*, 302 F. Supp. 1, 11-15 (D. D. C. 1969). But that a private litigant may seek a declaration of invalidity, as pursued here by Rohm and Haas, is no longer open to question.

patent may be tested under the Declaratory Judgment Act, 28 U. S. C. § 2201 (1964 ed.). See *Kerotest Mfg. Co. v. C-O Two Fire Equipment Co.*, 342 U. S. 180, 185 (1952).

The patent in suit is for a chemical compound known as 3,4-dichloropropionanilide, hereinafter 3,4-DCPA or propanil. The 1967 patent application asserted that only 3,4-DCPA had unusual and valuable herbicidal activity and that this activity was "surprising" because "related compounds possess little or no herbicidal efficiency." The district court concluded that Monsanto intentionally withheld material facts in order to mislead the Patent Office, thereby making its application for a patent taken as a whole misleading; that Monsanto came into court with unclean hands; that it was guilty of laches in asserting any right to patent the compound; that 3,4-DCPA was obvious within the meaning of 35 U. S. C. § 102; and that the compound was "described in printed publications" within the meaning of 35 U. S. C. 102(a)(b) and was therefore anticipated.[4] *Mon-*

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4. A similar, subsequent action by Monsanto, based on the same patent, was sustained by a district court in Texas. *Monsanto v. Dawson Chemical Corp.*, 312 F. Supp. 452 (S. D. Tex. 1970). We do not find persuasive that court's treatment of the misrepresentation issue or its conclusion that Monsanto "did nothing more than put their best foot forward." 312 F. Supp. at 463. Moreover, though the Texas district court considered and rejected the possible *res judicata* effects of Judge Masterson's prior decision, 312 F. Supp. 464-465, the Fifth Circuit Court of Appeals has reversed and remanded that decision in light of the Supreme Court's recent ruling in *Blonder-Tongue Laboratories, Inc. v. Univ. of Illinois Foundation*, ____ U. S. ____, (39 U. S. L. W. 4506, 1971). *Monsanto v. Dawson Chemical Corp.*, ____ F. 2d ____ (5th Cir. No. 30,687, June 8, 1971), slip opinion, p. 6:

> On May 3, 1971, the Supreme Court [in *Blonder-Tongue, supra*] with unanimous wisdom reversed its earlier holding in [*Triplett v. Lowell*, 297 U. S. 638 (1936)]. The Court ruled that a patent owner is bound by the judgment of patent invalidity in a prior suit against a different defendant unless the patent owner can show that for some reason the prior judgment should not be given this estoppel effect.

santo Co. v. *Rohm and Haas Co.*, 312 F. Supp. 778, 798-799 (E. D. Pa. 1970).

In the view we take, it becomes necessary to reach only the misrepresentation issue. And to do this requires a discussion of the chemical compounds in question, those related to them, and the various properties associated with them. Closely related to 3,4-DCPA is the chemical compound 3,4-dichloroacetanilide (3,4-DCAA), differing in its structural formula solely by having one less CH_2 group.

The first Monsanto (Huffman) application pertinent to these proceedings was filed May 27, 1957, and covered a class of 3,4-dichloroanilides comprising some one hundred compounds, including 3,4-DCPA and 3,4-DCAA, claiming herbicidal[5] compositions of chemical compounds and the use of these compounds to destroy undesired plants.[6] Huffman claimed that the members of the class possessed "unusual and valuable herbicidal activity," while related compounds

5. Capable of destroying plants.

6. Uncontested on the record are indications of substantial contemporaneous activity by Rohm and Haas. Appellee had developed 3,4-DCPA in 1957 and filed patent applications disclosing three compounds, including 3,4-DCPA, in 1958. In 1959, Rohm and Haas was issued a South African patent describing and claiming 3,4-DCPA as a selective, post-emergence herbicide. The compound's properties were reported by Dr. Roy Smith of the U. S. Department of Agriculture at the Southern Weed Conference in January, 1960; Dr. Smith's report was circulated generally thereafter.

Moreover, priority of invention in an interference proceeding involving this patent and these parties has now been resolved in favor of the appellee. Though Monsanto was granted the original award of priority by the Patent Office, on remand from the Court of Customs and Patent Appeals to consider new evidence not previously divulged, the Board of Patent Interferences has found that Rohm and Haas, having proven conception prior to the Huffman (Monsanto) filing date and diligence until reduction to practice, is entitled to the award of priority of invention previously enjoyed by Monsanto. *Wilson, et al.* v. *Huffman*, Patent Interference No. 93,751, Paper No. 309, (Final Hearing Opinion, Gaston, Examiner of Interferences, Board of Patent Interferences, United States Patent Office).

possessed "little or no herbicidal efficiency". Huffman confirmed this "unusual and valuable herbicidal activity" of *all* the compounds *included* in the claim. The Patent Office, in four separate office actions, rejected all of Huffman's claims as unpatentable under prior art disclosures.

Monsanto, through Huffman, tried again on May 8, 1961. Its application disclosed another large class of 3,4-dihalogenated anilides, again including 3,4-DCPA and 3,4-DCAA. Urging anew that the class possessed "unusual and valuable herbicidal activity," the application averred that, in addition to 3,4-DCPA, both 3' 4' -dichloroisobutyranilide and 3'4'-dichloromethacrylyanilide were useful as selective post-emergent herbicides for rice.[7] And again the Patent Office rejected the claim of the application as unduly broad and unpatentable over the prior art.

The patent in suit was the third Monsanto application, filed on February 3, 1967. This time it was represented that only 3,4-DCPA had "unusual and valuable herbicidal activity" and that the activity of this compound was "surprising" because "related compounds possess little or no herbicidal efficiency." The examiner rejected the single compound claim as obvious under prior art disclosing homologs[8] and isomers[9] of 3,4-DCPA, including 3,4-DCAA and 2,4-dichloropropinionanilide. The patent was issued, however, on May 7, 1968 after Monsanto submitted an affidavit of Dr. Robert F. Husted, based on tests performed by him on twenty plant species at three different

7. A selective, post-emergent herbicide when applied after emergence to a crop and weeds normally associated therewith, substantially destroys the weeds without adversely affecting the crop.

8. A homolog is a member of a series of compounds in which each member differs from the next member by a constant number of atoms.

9. Isomers are chemical compounds having the same molecular formula but different molecular structures.

rates of application per acre. The report as presented to the Patent Office asserted that 3,4-DCPA completely killed or severely injured nine of the eleven species and failed to have any effect on only two. Eight other compounds were reported to have no effect on any of the eleven plants and two other compounds, one of them 3,4-DCAA, either had very slight or no effect. Significantly, although the Husted tests entailed tests on twenty species, at three separate rates of application per acre, the Patent Office was informed of tests on only eleven species and only at one rate of application, two pounds per acre. In all, the affidavit showed less than 25 per cent of Husted's results; of 810 tests, only 150 were submitted.

The district court concluded that this close-cropping of Husted's findings amounted to misrepresentation.[10]

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10. The district court's Finding 37 set forth:

In its attempt to persuade the Patent Office that 3,4-DCPA was patentable over such prior art compounds, Monsanto, in the course of prosecuting this third application, filed on or about November 9, 1967, the affidavit of Dr. Robert F. Husted. (DX-1, pp. 47-50). This affidavit was drafted by one of Monsanto's patent attorneys and was based upon tests performed by Dr. Husted on about 20 plant species at three different rates of application per acre. The results of these tests were reported by Husted to counsel by letter with attached charts (DX-22). The affidavit only reports the results of tests of 10 compounds applied to 11 plant species at the rate of 2 lbs. per acre of application. The results were that 3,4-DCPA completely killed or severely injured 9 of the 11 species and failed to have any effect on only 2. By contrast, 8 other compounds were reported to have no effect on any of the 11 plants and two other compounds, one of them 3,4-DCAA, either had very slight effect or no effect.

A comparison of the affidavit (DX-1, pp. 47-50) with the letter and charts forwarded to counsel by Husted (DX-22) reveals the following (Cole, N. T. 787-813):

1. The affidavit states that 3,4-DCPA completely kills radishes at 2 lbs. per acre, earning a "4" rating (DX-1, p. 49). The charts attached to Husted's letter to counsel reveal that 3,4-DCPA only has moderate herbicidal value at 2 lbs. per acre, earning a "2" rating (DX-22, last page).

2. The charts in DX-22 indicate that at 2 lbs. per acre

Moreover, Judge Masterson found misrepresentation in the inconsistency of Monsanto's 1967 representations of 3,4-DCPA's unique herbicidal efficiency, despite assertions in 1957 and 1961 that 3,4-DCAA and other 3,4-dichloroanalides also had activity as herbicides.

The concept of misrepresentation as applied to patent infringement cases admits to no fixed parameters and promulgates no specific dogma. At best it is an abbreviated expression of basic equitable maxims inherent in the law of patents; a recognition that a part of the *quid pro quo* for the acquisition of a patent monopoly is an insistence that

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(Footnote 10—continued.)

3,4-DCAA has complete kill value on pigweed, earning a rating of "4" (DX-22, next to last page). The affidavit completely omits the results of this test. (DX-1, p. 49).

3. The affidavit fails to contain the results of tests where a compound other than 3,4-DCPA attained a rating higher than "1" (DX-1, p. 49). The second to last chart in DX-22 reveals that at 2 lbs. per acre, three compounds other than 3,4-DCPA achieved a rating of "2," which means a moderate herbicidal value.

4. The affidavit reports that 3,4-DCPA at 2 lbs. per acre achieved a "3" or "4" rating on all plant species except two where it achieved a "0" rating (DX-1, p. 49). DX-22 reveals that at 2 lbs. per acre 3,4-DCPA had a rating of less than 3 on several plant species, which results were not reported in the affidavit.

5. The affidavit fails to contain the results of Husted's testing at other than 2 lbs. per acre. (DX-22, first four charts). These show that 3,4-DCPA is somewhat less active at rates other than 2 lbs. per acre.

In addition to the above, the Huffman and Allen article (DX-8) reports the results of tests on various crops at 8 lbs. per acre of application and shows that 3,4-DCAA exhibits high herbicidal activity. This article, as well as the results of the tests in DX-22, were not brought to the attention of the patent examiner (Cole, N. T. 814).

These omissions were intentionally and deliberately made to mislead the patent office into believing that 3,4-DCPA had outstanding herbicidal value as compared to related compounds. The Husted affidavit failed to state facts necessary to be stated in order to make Monsanto's representation to the patent office, taken as a whole, not misleading.

312 F. Supp. at 785-786.

the circumstances surrounding the application for the patent be "free from fraud and other inequitable conduct." *Precision Co.* v. *Automotive Co., supra,* 324 U. S. 806, 816 (1945).

We perceive the test to be that articulated by Justice Frankfurter: "The facts of a given case must accordingly be measured by both public and private standards of equity":

> The guiding doctrine in this case is the equitable maxim that "he who comes into equity must come with clean hands." This maxim is far more than a mere banality. It is a self-imposed ordinance that closes the doors of a court of equity to one tainted with inequitableness or bad faith relative to the matter in which he seeks relief, however improper may have been the behavior of the defendant. That doctrine is rooted in the historical concept of court of equity as a vehicle for affirmatively enforcing the requirements of conscience and good faith. This presupposes a refusal on its part to be "the abettor of iniquity." Bein v. Heath, 6 How. 228, 247. Thus while "equity does not demand that its suitors shall have led blameless lives." *Loughran* v. *Loughran*, 292 U. S. 216, 229, as to other matters, it does require that they shall have acted fairly and without fraud or deceit as to the controversy in issue. *Keystone Driller Co.* v. *General Excavator Co.*, 290 U. S. 240, 245; *Johnson* v. *Yellow Cab Co.*, 321 U. S. 383, 387; 2 Pomeroy, Equity Jurisprudence (5th Ed.) §§ 379-399.
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> This maxim necessarily gives wide range to the equity court's use of discretion in refusing to aid the unclean litigant. It is "not bound by formula or restrained by any limitation that tends to trammel the free and just exercise of discretion." *Keystone Driller Co.* v. *General Excavator Co., supra,* 245, 246. Accordingly one's misconduct need not necessarily have been of such a nature as to be punishable as a crime or as to justify legal proceedings of any character. Any willful act concerning the cause of action which rightfully can

be said to transgress equitable standards of conduct is sufficient cause for the invocation of the maxim by the chancellor.

Moreover, where a suit in equity concerns the public interest as well as the private interests of the litigants this doctrine assumes even wider and more significant proportions. For if an equity court properly uses the maxim to withhold its assistance in such a case it not only prevents a wrongdoer from enjoying the fruits of his transgression but averts an injury to the public. The determination of when the maxim should be applied to bar this type of suit thus becomes of vital significance. See *Morton Salt Co.* v. *Suppiger Co.*, 314 U. S. 488, 492-494.

. . . The possession and assertion of patent rights are "issues of great moment to the public." *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U. S. 238, 246. See also *Mercoid Corp.* v. *Mid-Continent Investment Co.*; 320 U. S. 661, 665; *Morton Salt Co.* v. *Suppiger Co., supra; United States* v. *Masonite Corp.*, 316 U. S. 265, 278. A patent by its very nature is affected with a public interest. As recognized by the Constitution, it is a special privilege designed to serve the public purpose of promoting the "Progress of Science and useful Arts." At the same time, a patent is an exception to the general rule against monopolies and to the right to access to a free and open market. The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope. The facts of this case must accordingly be measured by both public and private standards of equity.

Precision Co. v. *Automotive Co.*, 324 U. S. 806, 814-816 (1945).

Otherwise stated, the test is whether the applicant for a patent has "displayed that standard of conduct requisite to the maintenance of this suit in equity." *Ibid.*, 324 U. S.

819.[11] Basically the issue resolves itself to a determination whether the representation to the Patent Office that "related compounds possess little or no herbicidal efficiency" was "tainted with inequitableness."[12]

In view of Huffman's previously unsuccessful attempts to obtain a patent, it is reasonable to conclude that his success with his 1968 application, originally rejected by the examiner, and later accepted after presentation of the Husted Report, was attributed to his emphasis that the compound possessed properties of "surprising . . . herbicidal efficiency" not possessed by related compounds. "From the standpoint of patent law, a compound and all its properties are inseparable; they are one and the same thing." *Application of Papesch*, 315 F. 2d 381 (C. C. P. A. 1963).

Thus, in view of the previous patent application rejections on the ground of prior art, it cannot be said that it was the unique chemical formula of 3,4-DCPA which gave rise to the issuance of the patent, but the representation made of it as a "compound and all its properties." Indeed, it was emphasized that these properties effected a herbici-

11. Story's Equity Jurisprudence (14th Ed.) vol. 1, § 99:

> Equity imperatively demands of suitors in courts fair dealing and righteous conduct with reference to the matters concerning which they seek relief. He who has acted in bad faith, resorted to trickery and deception, or been guilty of fraud, injustice, or unfairness will appeal in vain to a court of conscience, even though in his wrongdoing he may have kept himself strictly "within the law." Misconduct which will bar relief in a court of equity need not necessarily be of such a nature as to be punishable as a crime or to constitute the basis of a legal action. Under this maxim, any willful act in regard to the matter in litigation, which would be condemned and pronounced wrongful by honest and fairminded men, will be sufficient to make the hands of the applicant unclean. Both courts and textwriters have repeatedly spoken upon this subject in no uncertain language.

12. The Supreme Court has recently emphasized the applicability of equitable principles under federal declaratory judgment proceedings. See *Samuels* v. *Mackel*, 401 U. S. 66, 70 (1971).

dal efficiency not possessed by related compounds. This being the thrust of the representation to the Patent Office, it required the applicant seeking a patent monopoly to exercise a degree of candor and disclosure as to the herbicidal efficiency of related compounds commensurate with "equitable standards of conduct." *Precision Co., supra.*

The Husted affidavit to the Patent Office did not nearly reflect the total Husted test as transmitted to Huffman. Indeed, an examination of the report permits, if not compels, the misleading inference that it constituted a complete and accurate analysis of all the testing instead of an edited version thereof. Concealment and nondisclosure may be "evidence of and equivalent to a false representation, because the concealment or suppression is in effect a representation that what is disclosed is the whole truth." *Stewart v. Wyoming Cattle Ranch Co.*, 128 U. S. 383, 388-89 (1888). See, Concealment and Nondisclosure, Chafee and Re, EQUITY, 5th Ed., 1967, at 635-644.

Moreover, it cannot be convincingly argued that the examiner in the Patent Office in 1967, in a proceeding numbered 3,382,280, can be charged with knowledge of the contents of an abandoned application numbered 661,575 made in 1957. The record indicates that Huffman made no effort to bring to the attention of the Patent Office in 1967—when he was seeking a patent on 3,4-DCPA *per se,* attributing to it special herbicidal efficiencies not possessed by related compounds—that in 1957, and again in 1961, he had made representations to the Patent Office inconsistent with those made in 1967.

What, then, is the effect of this failure to make total disclosure? Clearly, if the 1968 patent on 3-4-DCPA qualified on its own as a formula or compound *per se,* without any consideration of its property for "unusual and valuable herbicidal activity" not possessed by related compounds, the necessity for a full and complete disclosure of the effect

of its properties would not assume the importance it requires here. In *Application of Papesch, supra,* 315 F. 2d 381 at 391, while considering the importance of properties of new chemical compounds in the context of determining unobviousness, Judge Rich emphasized:

> "From the foregoing cases it will be seen that this and other courts, . . . have determined the unobviousness and patentability of new chemical compounds by taking into consideration their biological or pharmacological properties. Nine of the ten cases above considered, directly or indirectly, involved such properties. Patentability has not been determined on the basis of obviousness of structure alone. In fact, where patentability was found in the above cases it was found in spite of the close similarity of chemical structure, often much closer similarity than we have here.
>
> ". . . From the standpoint of patent law, a compound and all its properties are inseparable; they are one and the same thing."

See also *Commissioner of Patents* v. *Deutsche,* 379 F. 2d 656 (D. C. Cir. 1969) where Chief Justice, then Judge, Burger, emphasized this same principle.

Applying these considerations to Justice Frankfurter's test of "both public and private standards of equity" we cannot bring ourselves to say that the application for the 1968 patent "displayed that standard of conduct" demanded under the circumstances. We hold that under the "totality of circumstances"—(1) the rejection for obviousness in 1957 of the class of compounds of which 3,4-DCPA was a member and the representations of their common properties with related compounds; (2) the similar rejection in 1961 for the same reasons, and (3) the original rejection of the application in 1967 and the subsequent acceptance only after receipt of the Husted affidavit—Monanto was obliged to disclose more information as to the

herbicidal properties of related compounds to the Patent Office than it did; for "what is at issue is not merely a contest between the parties but a public interest that cancelled or rejected claims not be revived or restored." *General Instrument Corp.* v. *Hughes Aircraft Co.*, 399 F. 2d 373, 385 (1st Cir. 1968).[13] Under these circumstances, it was impossible for the Patent Office fairly to assess Monsanto's application against the prevailing statutory criteria. Thus, Monsanto's failure to disclose amounted to misrepresentation transgressing equitable standards of conduct owed the public by the applicant in return for its monopoly.

Accordingly, Monsanto was not entitled to the patent monopoly, and the district court did not err in issuing the declaratory judgment of invalidity.[14]

The judgment of the district court will be affirmed.

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13. As the Supreme Court stated in *Graham* v. *John Deere Co.*, 383 U. S. 1, 33 (1966):

> "Claims as allowed must be read and interpreted with reference to rejected ones and to the state of the prior art; and claims that have been narrowed in order to obtain the issuance of a patent by distinguishing the prior art cannot be sustained to cover that which was previously by limitation eliminated from the patent."

14 The dissent expresses the view that the district court misapprehended the appropriate burden of proof required for a judgment of invalidity. From a colloquy occurring upon argument of appellant's motion for a new trial, the dissent finds that the district court believed that preponderance of the evidence, rather than clear and convincing proof, was enough to carry Rohm & Haas' allegation. Such an inference is refuted by the court's formal conclusions of law themselves. The court expressly stated that "[u]pon our examination of the record, we have concluded that Rohm and Haas has met its burden of proving invalidity by clear and convincing proof." *Monsanto* v. *Rohm & Haas*, *supra*, 312 F. Supp. at 797. The court then formally concluded: "6. Even if the presumption of validity were not destroyed, Rohm and Haas has met its burden

KALODNER, *Circuit Judge*, dissenting.

I disagree with the majority's determination that the District Court did not err when it held Monstanto's Huffman patent unenforceable on the ground that it was fraudulently obtained.

I would reverse the District Court's stated holding for these later developed reasons:

1. The District Court committed prejudicial error when it applied an erroneous standard of proof, *viz.*, that fraudulent procurement of a patent may be established by a "preponderance of the evidence." The applicable standard of proof is "clear, unequivocal and convincing evidence."

2. The District Court committed prejudicial error when it held that "*a specific intent to deceive is not necessary* to bar a patent when there is evidence of a deliberate withholding of material information," and, "even if the decision not to disclose was motivated *by nothing more than bad*

(Footnote 14—continued.)

of proving invalidity by clear and convincing proof." *Id.*, at 798. After argument on the motion, during which the colloquy relied upon by the dissent occurred, the court reaffirmed: "As to whether Rohm and Haas has met its burden of proof, we have decided to let the record stand as it is." *Id.*, at 799.

The dissent makes much of the district court's supplemental opinion, accentuating its reference to intentional fraud. This emphasis overlooks the basic thrust of the supplemental opinion which explicitly declared that "Even if we were persuaded to change our mind" and find that "Monsanto did not intend to mislead, . . . a specific intent to deceive is not necessary where there is evidence of deliberate withholding of material information." The court also made reference to the admission by Monsanto's counsel. "There is no question it wasn't accidentally left out." 312 F. Supp. at 799. Thus, the alternative ground suggested by the district court in no way negatives the principal basis of its original opinion.

judgment as to the materiality of the information, the patent must still be rejected.'"[1] (emphasis supplied).

3. It is settled that a party charging fraudulent procurement of a patent must prove by "clear, unequivocal and convincing evidence" that the Patent Office would not have issued the patent except for the fraud, and here there was not a scintilla of evidence that the Patent Office was misled into issuing the patent by the conduct condemned by the District Court. Indeed, the District Court did not make *any finding of fact* that the Patent Office was misled.

4. The District Court's fact-fiindings that the undisclosed "material" was of critical dimension in the obtaining of the patent and that there was a "deliberate withholding" of the material, were "clearly erroneous" since they were not established by "clear, unequivocal and convincing evidence" but by application of an inapplicable "preponderance of the evidence" standard of proof.

First: as to the District Court's erroneous application of a "preponderance of evidence" standard of proof in adjudicating Monsanto's patent unenforceable on the ground that it was fraudulently obtained:

These pertinent principles are well-settled:

> "Fraud" is never presumed and a party alleging fraudulent procurement of a patent bears a heavy burden of proof. *Edward Valves, Inc.* v. *Cameron Iron Works, Inc.*, 286 F. 2d 933, 947 (5th Cir. 1961), *cert. den.* 368 U. S. 833.[2]

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1. 312 F. Supp. 799.

2. "Fraud" is never presumed, and the burden is upon the defendant to show facts constituting fraud 'by clear, cogent, convincing and certain proof.' *Equitable Life Assurance Soc.* v. *Dunn* (C. C. A.), 61 F. 2d 450, 452." *New York Life Ins. Co.* v. *Kwetkauskas*, 63 F. 2d 890, 891 (3rd Cir. 1933), *cert. den.* 289 U. S. 762-63. To the same effect see *McDonnell* v. *General News Bureau, Inc.*, 93 F. 2d 898, 901 (3rd Cir. 1937).

"A finding that a patent was procured by fraud or unclean hands must be based on 'clear, unequivocal and convincing' evidence.

"*United States* v. *American Bell Telephone Co.*, 167 U. S. 224, 251, 17 S. Ct. 809, 42 L. Ed. 144 (1897)." *Scott Paper Company* v. *Fort Howard Paper Company*, 432 F. 2d 1198, 1204 (7th Cir. 1970), *cert. den.* 401 U. S. 913 (1971). *See, too, McCullough Tool Company* v. *Well Surveys, Inc.*, 343 F. 2d 381, 394 (10th Cir. 1965), *cert. den.* 383 U. S. 933 (1966), *rehearing den.* 384 U. S. 947 (1966); *Armour & Co.* v. *Wilson & Co., Inc.*, 274 F. 2d 143, 148 (7th Cir. 1960); *Baldwin-Lima-Hamilton Corporation* v. *Tatnall Measuring Systems Company*, 169 F. Supp. 1, 25 (E. D. Pa. 1958), *aff'd on other grounds*, 268 F. 2d 395 (3rd Cir. 1959), *cert. dend.* 361 U. S. 984.

"To successfully assert that intentional misrepresentations were made, *the standard of proof to be met is not a preponderance of the evidence but the intentional misrepresentations must be proved to a reasonable degree of certainty, otherwise the defense of unclean hands cannot be upheld.*" *Corning Glass Works* v. *Anchor Hocking Glass Corporation*, 253 F. Supp. 461, 471 (D. Del. 1966), *modified on other grounds*, 374 F. 2d 473 (3rd Cir. 1967), *cert. den.* 389 U. S. 826. (Emphasis supplied).

"Prejudicial error" is committed when a federal court applies a "preponderance of evidence" standard in making a factual determination with respect to allegations of fraudulent conduct. *Barr Rubber Products Company* v. *Sun Rubber Company*, 425 F. 2d 1114, 1120-1121 (2nd Cir. 1970), *cert. den.* 400 U. S. 878.

That the District Court applied a "preponderance of evidence" test in making its fact-findings is evident from the following colloquy[3] relating to the sweep of the burden of proof imposed on a party alleging fraud in the procurement of a patent:

3. Page 26, transcript of proceedings of April 14, 1970, upon argument of counsel on Monsanto's Motion for a Partial New Trial.

"The Court: Look, if this were a criminal case, Mr. Leydig [Monsanto's counsel], it is very possible as to the intention to deceive *a jury might have a reasonable doubt under all of the evidence in the case.*

"But it is not a criminal case. It is a civil case. *The burden is the preponderance of the evidence,* and I have found that it is *more probable than not.*

"Mr. Leydig: It is more than that, Your Honor.

"The Court: *That is all it is.*" (Emphasis supplied.)

Second: as to the District Court's holding that ". . . *a specific intent to deceive is not necessary* . . . when there is evidence of a deliberate withholding of material information," and that the patent must be rejected "even if the decision not to disclose was motivated by *nothing more than bad judgment as to the materiality of the information* . . ."[4] (Emphasis supplied):

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4. The District Court, in its Supplemental Opinion denying Monsanto's Motion for a Partial New Trial which was premised largely on the contention that the District Court had erroneously found that "omissions were intentionally and deliberately made" in the patent application proceeding, said:

"As to whether Rohm & Haas has met its burden of proof, we have decided to let the record stand as it is. However, we are compelled to point out that even if we were persuaded to change our mind and find that although there were intentional omissions of fact. Monsanto did not intend to mislead the Patent Office, this would not lead us to a different conclusion with respect to the validity of a patent in light of such omissions. For the same policy considerations which underlie our February 17th Opinion (pages 792-794), *we hold that even if Monsanto did not intend to deceive the Patent Office, the fact that it intentionally withheld facts which were material to the decision whether it was entitled to a patent is sufficient to bar the issuance of a patent . . . even if the decision not to disclose was motivated by nothing more than bad judgment as to the materiality of the information, the patent must still be rejected. We hold that a specific intent to deceive is not necessary to bar a patent when there is evidence of a deliberate*

The stated holding is in plain disregard of the settled rule that in order to establish "fraudulent procurement" of a patent, intentional fraud must be proved, and "*an honest mistake,*" made "*in good faith,*" does not attain the dimension of intentional fraud. *Walker Process Equipment, Inc.* v. *Food Machinery & Chemical Corp.*, 382 U. S. 172, 177 (1965), *See, too, Bendix Corporation* v. *Balax, Inc.*, 421 F. 2d 809, 819 (7th Cir. 1970), *cert. den.* 399 U. S. 911.

It has been specifically held that enforcement of a patent should not be denied "merely because of an innocent or good faith non-disclosure"; "an applicant for a patent should be accorded the right to exercise good faith judgment in deciding what matters are and are not of sufficient relevance and materiality to require disclosure"; and that "[o]nly when he is guilty of fraud, willfulness or recklessness indicating a disregard for his duty of frankness should enforcement of the patent be barred." *Xerox Corporation* v. *Dennison Manufacturing Company*, 322 F. Supp 963, 968-969 (S. D. N. Y. 1971).

Significantly relevant to the District Court's holding here that a patent must be rejected "even if the decision not to disclose was motivated by nothing more than bad judgment" is the contrary holding in *Tractor Supply Co.* v. *International Harvester Company*, 155 U. S. P. Q. 420 (D. C. N. D. Ill. E. Div.) 1967. There the Court said (p. 433):

> "An allegation of 'innocent' misrepresentation concerning the procurement of a patent, coupled with the lack of any proof that the patentee or his assignee

(Footnote 4—continued.)

withholding of material information. Of course, if it is found that the facts withheld were not even marginally material to the issues before the Patent Office, then our decision on this precise issue would be different." 312 F. Supp. 799. (emphasis supplied).

> acted fraudulently, intentionally, or willfully, is wholly inadequate to render a patent unenforceable in equity against an alleged infringer. To hold otherwise would work a forfeiture of the patentee's property *in the absence of unconscionable or morally reprehensible conduct*, something which equity is always reluctant to do." (Emphasis supplied.)

Third: As to the utter lack of evidence that the Patent Office would not have issued the patent but for the claimed fraudulent conduct:

Federal courts have time and again ruled that a party challenging enforcement of a patent on the ground that it was obtained by material misrepresentations or omissions in the patent application proceedings, must prove by "clear, unequivocal and convincing evidence" that the Patent Office would not have issued the patent but for the claimed misrepresentations or omissions.

In *Waterman-Bic Pen Corporation* v. *W. A. Sheaffer Pen Company, Division of Textron, Inc.*, 267 F. Supp. 849 (D. Del. 1967), the Court said at page 856:

> "A person attacking the validity of a patent for alleged fraudulent representations must prove that the representations were material—*that the patent would not have issued but for the representations.*" (Emphasis supplied.)

To the same effect, *see SCM Corporation* v. *Radio Corporation of America*, 318 F. Supp. 433, 448 (S. D. N. Y. 1970); *Corning Glass Works* v. *Anchor Hocking Glass Corporation, supra*, at 253 F. Supp. 469.

It is of the utmost relevance that no specific evidence was adduced below on the critical issue as to whether the Patent Office was misled into granting the patent by virtue

of any omissions in the Husted affidavit. The District Court's conclusion that the Patent Office was thereby misled was based solely on "inference." On that score, it has been squarely held that "inference" cannot be substituted for "clear and convincing proof" in determining whether the Patent Office has been misled by material misrepresentations or omissions. *Nashua Corporation* v. *RCA Corporation,* 307 F. Supp. 152 (D. N. H. 1969) *aff'd* 431 F. 2d 220 (1 Cir. 1970). There, the District Court, in rejecting a claim that the patent applicant withheld material information in an affidavit submitted to the Patent Office, said:

> "There is no evidence *as to how this affidavit was interpreted and understood by the Patent Examiner and there is no evidence as to what extent, if any, the Patent Examiner relied on it. This, perhaps, may be inferred, but an allegation of fraud requires clear and convincing proof and should not be based on inferences.*" 307 F. Supp. 158. (Emphasis supplied.)

Fourth: the District Court's fact-findings that there was a "deliberate withholding" of "material" information, were clearly erroneous inasmuch as they were the fruit of an inapplicable "preponderance of the evidence" standard of proof:

The record below fails to disclose any evidence that the facts withheld from the Patent Office were "material" to the granting of the patent. That the District Court was aware of the vulnerability of its fact-finding that the withheld information was "material" is apparent from its statement in sub-section (c) of its Conclusions of Law No. 2:

> "Even of the facts withheld from the patent office were not material, Monsanto has come into court with unclean hands." 312 F. Supp. 798.

The record further contains no factual evidence that there was a "deliberate withholding" of information. There was, however, affirmative testimony by the then counsel for the patent applicant that the omitted data was not included in he Husted affidavit because in his opinion it was not material. This testimony was not challenged nor was it impeached.

It is pertinent to note that in *Monsanto Company* v. *Dawson Chemical Company*, 312 F. Supp. 452 (S. D. Tex. 1970)[5] the District Court, with knowledge of the Opinion in the instant case, rejected similar allegations of fraudulent procurement of the Monsanto Huffman patent, on its finding that they were not supported by "clear, unequivocal and convincing" evidence.

In that case, the District Court said in relevant part at page 462:

> "The law is settled that the proof of fraud must be clear, unequivocal, and convincing and a mere preponderance of the evidence which leaves the issue in doubt may not properly be a basis for a finding of fraud. Baldwin-Lima-Hamilton Corp v. Tatnall Meas. Sys. Co., *supra*, 169 F. Supp. p. 25. When these guidelines are applied to the present case, the inescapable conclusion is that defendants have failed in their burden of proof. The only misinformation presented to the Patent Office is the degree of phytotoxicity of 3,4-DCPA on radishes. There is no evidence that this small corner of a broad picture presented to the patent examiner materially influenced the decision to grant the patent. The remaining contention on unclean hands relates not to what was said, but rather to what was

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5. Reversed and remanded, 443 F. 2d 1035 (5th Cir. 1971), in light of Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation, ... U. S. ..... 1971. See n. 4, Majority Opinion, *supra*.

not said. Defendants have not established that the withholding of this information was done with intent to deceive the Patent Office. They have similarly failed to prove the materiality of the information withheld, that the patent examiner would have rejected the application had he known of the matters said to be withheld as was true in Charles Pfizer & Co. v. FTC, *supra*. To overcome the initial rejection by the patent examiner, it was necessary for plaintiffs to convince her that 3,4-DCPA had properties neither predictable from, nor in fact possessed by, 3,4-DCAA. By the manner in which they went about this task, plaintiffs did nothing more than put their best foot forward. Defendants' contentions on this point are therefore without merit."

This, too, must be said with respect to the majority's reliance on *Precision Instrument Manufacturing Co.* vs. *Automotive Maintenance Machinery Co.*, 324 U. S. 806 (1945). There the evidence conclusively established that the patent in suit had been obtained by fraud, intentionally concealed from the Patent Office with intent to deceive. *Precision, accordingly*, is inapposite on its facts.

The majority has found it necessary to reach only the misrepresentation issue. I have accordingly confined this dissent to that issue. It is meet that I should say that I would also reverse the District Court's Judgment insofar as it is premised on its holdings that the Monsanto Huffman patent is invalid because it is "obvious" and "anticipated," and unenforceable because of "laches."

Petition for Rehearing.

IN THE UNITED STATES COURT OF APPEALS
For the Third Circuit

No. 19132

MONSANTO COMPANY,
Plaintiff-Appellant,

vs.

ROHM & HAAS COMPANY,
Defendant-Appellee.

Appeal from the United States District Court
for the Eastern District of Pennsylvania.
Honorable THOMAS A. MASTERSON, *Trial Judge.*

PETITION FOR REHEARING.

(Filed February 9, 1972)

Plaintiff-appellant Monsanto Company respectfully requests this Court to reconsider its decision of January 12, 1972, in which, without reaching the other issues (including that under 35 U. S. C. § 103), the Court affirmed the district court judgment that Monsanto, by deliberate misrepresentations to the Patent Office, had overcome a rejection of obviousness under § 103.

With all due respect, it must be said that the Court in deciding that misrepresentation was proved by clear and convincing evidence without attempting to determine what is material to a determination of unobviousness under § 103

and without even considering whether the Examiner would have reached a different result with *all* the Husted tests before her has condemned the plaintiff out of hand.

I. The Dissenting Opinion Is Correct.

The defendant's total failure to meet its burden of proof has been lost in a prejudicial misunderstanding of the facts. The dissenting opinion is correct and to the point. The majority has dismissed the telling criticisms in the dissent in a most superficial manner.*

There is not the slightest evidence that the Patent Office was misled or that the patent should not have been granted. And every reasonable doubt has been resolved against the plaintiff as to a supposed intention to mislead.

The District Court reached an erroneous holding of intentional deceit but went on to conclude that an intent to deceive is unnecessary when there is evidence of "deliberate" omission of "material" information. Unfortunately its notions of materiality were based upon an erroneous reading of the patent law** and a semantic twisting of "deliberate." (App. 780) This Court has failed to even look beneath the surface of the lower court's determination of misrepresentation to see if the alleged deceit had any material bearing on the patentability issue.

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* Footnote 14 of the majority opinion notes that the District Court had said (in its Conclusion of Law No. 6) that it applied the "clear and convincing" formula. But that was as to invalidity, in general. The test of significance here is what it actually did on the misrepresentation issue.

** The trial court erred in applying a pre-§ 103 case. *In re Henze*, 181 F. 2d 196 (CCPA 1950), long discredited and since explicitly overruled as to the rationale upon which the Court below relied by *In re Stemniski*, 444 F. 2d 581 (CCPA, 1971). The trial court also erred in refusing to follow the very cases to which this Court has referred: *In re Papesch*, 315 F. 2d 381 (CCPA, 1963) and *Deutsche Gold und Silber-S* v. *Com'r of Patents*, 251 F. Supp. 624 (D. D. C. 1966), *aff'd*, 397 F. 2d 656 (D. C. Cir. 1968).

II. The Misrepresentation Conclusion Is Constructed on Errors and Misunderstandings.

Clearly underlying the majority's decision are three closely related items of supposed evidence of plaintiff's deceit. First, is the alleged "inconsistency" between the first two Huffman applications and the third which prompted the Court to highlight the presumably offending passage from the patent in suit at the outset of the opinion. *Second*, is the misconception that plaintiff—in the third Huffman application—asserted, contrary to representations in the first two applications, that "only" 3, 4-DCPA had herbicidal activity. And *third*, is the absence in the Husted affidavit of the data on the effect of 3, 4-DCAA on pigweed. If the Court will acknowledge as it reads this that these items are, indeed, what influenced its decision and will resist any tendency to brush over the following arguments because they appear in a rarely-granted petition for rehearing, we promise in the next few lines to show that the Court has reached a terribly unjust result on the basis of two wholly erroneous beliefs (engendered, of course, by defendant's arguments) and a misunderstanding of the patent soliciting process in the Patent Office.

Nowhere Did Plaintiff Say That 3, 4-DCPA Was the "Only" 3, 4-Dichloroanilide Having Herbicidal Activity.

The Court plainly reached its determination of misrepresentation believing that plaintiff's attorneys had shifted from a position in the first two applications, that a group or class of 3, 4-dichloroanilides shared a previously unknown and surprising herbicidal efficiency, to saying—in the third application—that 3, 4-DCPA was the "only"* compound of the class having such activity.

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* Opinion page 6. Defendant's proposed finding 50 was the source of erroneous language in Finding of Fact 35 (App. 678-679) that the 1967 application "asserted that *only* 3, 4-DCPA

The Court has relied on this apparently critical "fact" without realizing that plaintiff never said or implied it. 3, 4-DCPA *is* the best—by far—but not the only one. And no one connected with plaintiff ever said so. It should be apparent from the fact plaintiff was simultaneously prosecuting both the second and third applications and that the second (which was referred to on the very first page of the third) clearly disclosed and claimed herbicidal efficiency for the *class*, that precisely the opposite was true.

The "Inconsistency" Exists Only by Misunderstanding What Was Said.

The Court indicts plaintiff for being inconsistent in making the two, almost identical statements to the Patent Office which appear on the facing page. The statement on the left refers to the *class*** of "present compounds" which Huffman discovered had surprising herbicidal efficiency as compared to "related compounds" which his tests showed had "little or no herbicidal efficiency." Examples of 13 very closely related*** anilides which, it is undisputed, have "little or no herbicidal efficiency" are then given.

(Footnote—continued.)

had 'unusual and valuable herbicidal activity' ". The trial court did *not* accept the next sentence of the same proposed finding for which the first sentence was the obviously intended prop, namely that "Monsanto adopted a position inconsistent with its position in the first two applications . . . ". The mischief was done, however, when the unfairly loaded phrase was left to invite the very finding of inconsistency which the court below rejected.

** 3, 4-dichloroanilides having less than nine carbon atoms in the anilide group (DX-2; at 710). That class includes both 3,-4-DCPA and 3,4-DCAA.

*** The term "related compounds" as used in the paragraph appearing in the three Huffman applications refers to very similar compounds (i.e., anilides) which were *not* members of the class but which include a homolog (3, 4-DCLA [3, 4-dichlorolauranilide]) and the very isomer (2, 4-DCPA) relied on by the Examiner.

Huffman's Second Application* (DX-2; at 719) [Emphasis Added]	Huffman's Third Application (DX-1; at 649) [Emphasis Added]
"The herbicidal efficiency of the present compounds is surprising, for related compounds possess little or no herbicidal efficiency. When tested as described above, aqueous emulsions of a random group of such compounds are found to possess little or no herbicidal activity. Some of the compounds tested are set forth below:"	"The herbicidal efficiency of 3, 4-DCPA is surprising, for related compounds possess little or no herbicidal efficiency. When tested as described above, aqueous emulsions of a random group of such related compounds are found to possess little or no herbicidal activity. Some of the compounds are set forth below:"
3'-chloroisobutyranilide	3'-chloroisobutyranilide
3'-chloroacetanilide	3'-chloroacetanilide
4'-bromo-2'phenylacetanilide	4'-bromo-2'phenylacetanilide
2' 4'-dichloropropioanilide	2' 4'-dichloropropioanilide
2', 4'-dichloroisobutyranilide	2', 4'-dichloroisobutyranilide
2', 4', 5'-trichloroisobutyranilide	2', 4', 5'-trichloroisobutyranilide
3', 4'-dichlorolauranilide	3', 4'-dichlorolauranilide
2', 4'-dimethylpropionanilide	2', 4'-dimethylpropionanilide
N-methylacetanilide	N-methylacetanilide
N-n-butylacetanilide	N-n-butylacetanilide
p-chloracetylacetanilide	p-chloracetylacetanilide
2', 4'-dimethylpropionanilide	2', 4'-dimethylpropionanilide
2-chloro-2', 4'-dimethylpropionanilide	2-chloro-2', 4'-dimethylpropionanilide

* The exact same passage also appears in Huffman's first application (DX-3, at 806).

The statement on the right is completely consistent with the first because 3, 4-DCPA is a member of the *class* of compounds which was the subject of the first two applications. Pursuant to Patent Office requirements* the 1967 divisional application followed the disclosure and phraseology of the earlier application from which it was carved and as of whose date it speaks. (App. 698-699) It properly ascribes to the only member (3, 4-DCPA) of the class represented by the divisional case the same property relative to the same "related compounds" as to the class itself. The parallel being drawn in each application was between Huffman's inventions and the closely "related", but non-herbicidal, anilides. 3, 4-DCAA had no place in the latter group.

Hasted's Affidavit Was Not Untruthful or Misleading as to 3, 4-DCPA's Effectiveness.

When the 1967 Huffman application was filed, the Patent Office had already before it in the first two Huffman applications his discovery that 3, 4-DCPA was one of a class of compounds (including 3, 4-DCAA) which had herbicidal properties. It had been told in each of the first two applications (DX-3; at 805; DX-2; at 718) that 3, 4-DCAA killed pigweed. What it may not have appreciated prior to the filing of 1967 application was the head-and-shoulders superiority of 3, 4-DCPA. The affidavit (DX-1; at 691) accurately confirmed (trial court opinion; App. 691) that 3, 4-DCPA had novel and unexpected herbicidal properties.

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*Section 201.06 of the Manual of Patent Examining Procedure specifies in part: "The divisional application should set forth only that portion of the earlier disclosure which is germane to the invention as claimed in the divisional application. . . . While a divisional application may depart from the phraseology used in the parent case, there may be no departure therefrom in substance . . . that would amount to 'new matter' if introduced by amendment into the parent case . . .".

The 1967 patent application itself reported tests on 31 plant species with 3, 4-DCPA. But by reporting the Husted tests on 11 species in direct comparison with the 9 closest compounds, the truly remarkable qualities of 3, 4-DCPA were thrown into sharp focus. Under these circumstances and in the light of such data the fact that 3, 4-DCAA could kill pigweed or that lesser application rates led to less significant results were not material in any sense to the issue under § 103. Herbicides like medicines must, of course, be used in a sufficient dosage to be effective. And there was nothing the Examiner could or would have done with the "missing" data. The reference to the earlier applications, containing the explicit showing of 3, 4-DCAA's herbicidal effect on pigweed, appeared under a prominent subtitle on the first page of the 1967 application (DX-1; at 643) and was explicitly reiterated in the Huffman affidavit (DX-1; at 667) *which Mr. Cole gave to the examiner along with the Husted affidavit.*

Other Points Misapprehended by the Majority.

Without elaboration we outline below a number of additional points on which the majority has clearly misapprehended either the law or the facts. There are enough of them to place in serious question the Court's comprehension of other relevant facts on which the Court may not have so revealed its misunderstandings.

1. **"Moreover, priority of invention in an interference proceeding involving this patent and these parties have now been resolved in favor of the appellee." (Footnote 6, Opinion, p. 5)**

Where did this egregious error come from? The second (1961) Monsanto application, not the patent in suit, was (and still is) involved in the interference. The interference involved a process claim. It also is under appeal. The Patent Office has not decided for this Court any of the issues before it.

2. "The Patent Office, in four separate office actions, rejected all of Huffman's claims [in the 1957 application] as unpatentable under prior art disclosures." (Opinion, p. 6)

The 1957 application file reveals that the Examiner there in fact found some of the claims allowable (DX-3; at 845). Again, the statement (Opinion, p. 6) that "[a]nd again the Patent Office rejected the claim of the [1961] application . . ." ignores the fact that the Patent Office considered a claim patentable to Monsanto in order to put its 1961 application into interference. These facts should make no difference one way or another, but the Court emphasized as significant "Huffman's previously unsuccessful attempts to obtain a patent" (Opinion, p. 11). That an applicant ultimately succeeds does not make his conduct suspect any more than reversal of a trial court renders the appeal suspect. And in view of the Court's reference (Opinion, p. 14) to ". . . a public interest that cancelled or rejected claims not be revived or restored", it should be noted that the Patent Office did not examine a claim to the compound 3,4-DCPA until such a claim was submitted in the third (1967) application. The plaintiff is apparently presumed to have succeeded by stealth because it succeeded and to have acted against the public interest because it did not accede to the Examiner's initial and only rejection of the claim to 3,4-DCPA (DX-1; at 661).

3. "In all, the [Husted] affidavit showed less than 25 percent of Husted's results; of 810 tests, only 150 were submitted." (Opinion, p. 7)

Where the Court got its tests-run vs. tests-submitted statistics* is as much a mystery as is its undiscriminating attachment of significance to them in the first place. But

* Instead of a total of "810 tests" of which "only 150 were submitted" there is in fact a total of 899 tests in Dr. Husted's report (DX-22) of which 110 were included in the affidavit.

the critical point is that the data not submitted underscores —rather than detracts from—the nonobvious herbicidal properties of 3, 4-DCPA on which the affidavit focused.

Of the 789 test results appearing in the Husted report but not in the affidavit, 669 of those show a herbicidal rating of "0" ("No phytotoxicity"*), 66 show a rating of "1" ("Slight phytotoxicity") and 27 show a rating of "2" ("Moderate phytotoxicity")—*a total of 762 (about 97%) in which the results clearly showed little or no herbicidal activity.* There were only 35 tests in the entire Husted report showing a rating of "3" ("Severe phytotoxicity") or "4" ("Dead"). Of those, 31 involve 3, 4-DCPA and the other four involved 3, 4-DCAA. So there were only four tests out of 899 in which a compound other than 3, 4-DCPA showed even near herbicidal activity. Less than half of one percent! And those four were obtained with 3, 4-DCAA—the only other compound in the tests which was part of the *class* disclosed in the first two applications and a compound *whose herbicidal activity was discovered by Dr. Huffman.*

4. "Moreover, it cannot be convincingly argued that the examiner in the Patent Office in 1967, in a proceeding numbered 3,382,280, can be charged with knowledge of the contents of an abandoned application numbered 661,575 made in 1957." (Opinion, p. 12)

This startling statement—in rejection of plaintiff's contention that it could hardly be said to have been hiding the ability of 3, 4-DCAA to kill pigweed—goes out of its way to be wrong. No proceeding numbered 3,382,280 was before the Examiner. That was the later assigned patent number of the 1967 application 613,738. The controlling fact is that

* The Court's Footnote No. 5 correctly defines a herbicide as something that is capable of *destroying* a plant. "Phytotoxic" means poisonous or toxic to plants. And as is clear from the Husted ratings of "0" to "4" some compounds show some toxicity to some plants, at practical application rates, but are not herbicidal.

the first page of the 1967 application before her contained prominent cross references to the 1957 and 1961 applications (DX-1; at 643). They thus became working documents and part of the record which Examiner Trusof was duty-bound to review. There is no reason whatever from facts on this record or anywhere else to conclude she did not do her duty.* She was charged with knowledge of the previous applications, she in fact had knowledge of them,** and she was also aware of the interference proceedings (which involved the second application).

5. "We hold that under the 'totality of circumstances'—(1) the rejection for obviousness in 1957 of the class of compounds of which 3, 4-DCPA was a member . . . (2) the similar rejection in 1961 for the same reasons . . ." (Opinion p. 13)

The "class of compounds of which 3, 4-DCPA was a member" was *never* claimed—in any of the three Huffman applications. The first two applications were directed to the *use* of the class of compounds (or certain species, including 3, 4-DCPA) as herbicides. Plaintiff knew very well it could not claim the class as new compounds—because the class contained prior art compounds, e.g., 3, 4-DCAA—and it never attempted to do so. If the elements of the "totality of circumstances" were not understood, how could the plaintiff have been fairly judged?

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*The Manual of Patent Examining Procedure requires the Examiner to refer to the parent applications of the patent being examined. Section 708 states in part "Examiners are responsible for making this determination [that the disclosure of the earlier case adequately supports claims of the later case]." Section 707.05 specifies in part "In all continuing applications, the parent applications should be reviewed for pertinent prior art."

**In another case involving this patent, *Chris-Craft Industries, Inc.* v. *Monsanto Company*, Civil Action 68-815-WPG, District Court for the Central District of California, Examiner Trusof was deposed on January 26, 1970 by the declaratory judgment plaintiff and asked if she had looked at the two prior files. Lest any further mystery be made of usual Patent Office procedure, it may be noted that she testified flatly that she had.

III. Reconsideration Is Unusually Important Here.

On the very day this appeal was argued, the Supreme Court handed down its opinion in *Blonder-Tongue Laboratories, Inc.* v. *Univ. of Illinois Foundation,* 402 U. S. 313 (1971). Under that ruling the first judgment of invalidity of a patent gives rise to an estoppel defense in subsequent actions against other defendants, making it particularly important that the first judgment on patent validity issues be full, fair, and impartial. As noted in Footnote 4 of the opinion, the Fifth Circuit Court of Appeals, in view of the fact of Judge Masterson's opinion below and without consideration of its merits, has reversed and remanded the judgment of the Houston District Court, speaking through Judge Singleton, that the Huffman patent is valid. Who is going to accept the responsibility of reviewing Judge Masterson's conclusion on patent invalidity? Surely the Supreme Court expected more than this under *Blonder-Tongue* on the patentability issues. Other parties looking to this opinion for guidance need more than they have received. Judge Kalodner's strong dissent and Judge Singleton's decision at 312 F. Supp. 452 underscore that there are, indeed, "honest and fairminded men" who would not condemn the plaintiff on the evidence in this case.

A hearing on all the issues on appeal is again repectfully requested.

Respectfully submitted,

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Decision on the Petition for Rehearing.

UNITED STATES COURT OF APPEALS
For the Third Circuit

No. 19,132

MONSANTO COMPANY, *Appellant*,

vs.

ROHM & HAAS COMPANY, *Appellee.*

SUR PETITION FOR REHEARING

Present: SEITZ, *Chief Judge*, and KALODNER, VAN DUSEN, ALDISERT, ADAMS, GIBBONS, MAX ROSENN, JAMES ROSEN, *Circuit Judges.*

The petition for rehearing filed by Appellant in the above entitled case having been submitted to the judges who participated in the decision of this court and to all the other available circuit judges of the circuit in regular active service, and no judge who concurred in the decision having asked for rehearing, and a majority of the circuit judges of the circuit in regular active service not having voted for rehearing by the court in banc, the petition for rehearing is denied.

By the Court,

/s/ RUGGERO J. ALDISERT,
Judge.

Dated: February 29, 1972.

*Judge Hunter did not participate in the consideration of this petition for rehearing.

Order Amending Opinion of January 12, 1972.

UNITED STATES COURT OF APPEALS
For the Third Circuit

No. 19,132

MONSANTO COMPANY, *Appellant*,

vs.

ROHM & HAAS COMPANY, *Appellee*.

Present: KALODNER, VAN DUSEN and ALDISERT,
Circuit Judges

ORDER.

It is ORDERED that the opinion heretofore filed in the above be and the same is amended as follows:

1. Delete in its entirety the second paragraph of footnote 6 on page 5.

2. Delete the last line of the paragraph on page 7 and substitute the following therefor: "results; of 899 tests, only 110 were submitted."

3. Delete the first two lines of the first full paragraph on page 9 and substitute therefor the following: "We perceive the test to be that set forth by the Supreme Court in *Precision:* 'The facts . . . must accordingly."

4. On page 12, delete the third line of the third paragraph and substitute the following therefor: "bered 613,738, can be charged with knowledge of all the" . . . .

5. On page 13 in the first full paragraph delete in the first line "Justice Frankfurter's" and substitute therefor *"Precision's"*.

RUGGERO J. ALDISERT,
Circuit Judge.

Dated: March 9, 1972.

Opinion of the Trial Court.

IN THE UNITED STATES DISTRICT COURT,
For the E. D. Pennsylvania.

MONSANTO COMPANY

vs.

ROHM AND HAAS COMPANY.

Civ. A. No. 68-1269.

FINDINGS OF FACT, OPINION, CONCLUSIONS OF LAW, AND ORDER.

(Feb. 17, 1970. As Amended March 2 and March 4, 1970.)

MASTERSON, *District Judge.*

A. NATURE OF ACTION AND JURISDICTION.

1. Plaintiff (hereinafter "Monsanto") is a Delaware corporation with its principal place of business in St. Louis, Missouri. Defendant (hereinafter "Rohm and Haas") is a Delaware corporation with its principal place of business in Philadelphia, Pennsylvania. (Final Pre-Trial Order, p. 1).[1]

2. This action arises under the patent laws of the United States and this Court has jurisdiction over the parties and the subject matter thereof under 35 U. S. C. § 271 and 28 U. S. C. §§ 1338 and 1400. (PTO, p. 1).

1. Hereafter, this source will be designated "PTO" followed by reference to the particular page or section and paragraph number of the particular attachment from which the Finding is drawn.

3. The action involves the validity, enforceability and infringement of plaintiff's United States Letters Patent No. 3,382,280, issued May 7, 1968, entitled "3',4'-dichloropropionanilide".[2] (Plaintiff's Exhibit No. 1).[3]

4. Monsanto has sued Rohm and Haas for damages for its alleged infringement of the above patent and also asks for an injunction against further infringement.

Rohm and Haas has counterclaimed, first for a declaratory judgment of invalidity, noninfringement and unenforceability of said patent (paragraphs 12 through 14 of its Answer and Counterclaims), and secondly for an injunction against and damages for plaintiff's allegedly unfair competitive acts against defendant's manufacture and sale of its allegedly infringing compound (paragraphs 15 through 20 of its Answer and Counterclaims). The foregoing injunction would, *inter alia*, prevent plaintiff from asserting the patent in suit against defendant and its customers. Those issues affecting the extent of defendant's liability have been deferred to an accounting, to be had in the event of an appellate or unappealed decision in favor of plaintiff. Those issues arising under defendant's second Counterclaim, paragraphs 15 through 20 in the Answer and Counterclaims, have been deferred to a separate trial to be had after a final determination of the patent infringement issue. (PTO, pp. 1-2).

Rohm and Haas has stipulated that if plaintiff's patent is valid and enforceable, it is guilty of infringement (PTO, Agreed Statement of Contested Legal and Factual Issues) since it manufactures 3,4-DCPA in the Philadelphia area and the compound is formulated into a product called

2. Hereafter, references to this chemical compound will be made in the shortened forms of "3,4-DCPA" or "propanil".

3. Hereafter, plaintiff's exhibits will be designated "PX" and defendant's exhibits "DX" followed by the number of the particular exhibit in question.

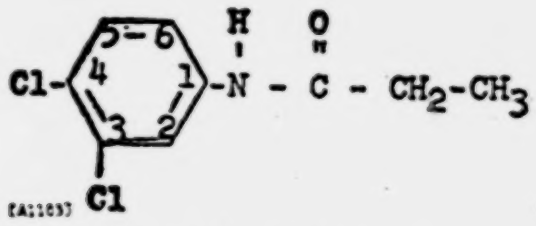
STAM F-34 containing three pounds of 3,4-DCPA per gallon.

Hence, the case before this Court has resolved itself into a legal and factual dispute over the validity and enforceability of Monsanto's patent.

5. The trial in this case was extensive, commencing on November 12, 1969, and concluding on November 19, 1969. The Court entertained argument on the legal issues involved on November 21, 1969. The transcript of the trial record comprises about 1,000 pages and multiple exhibits. The testimony at trial concerned technical matters, and conflicts therein were resolved only after careful consideration of the most credible evidence, both testimonial and documentary.

B. Chemical Facts and Definitions.

6. 3,4-DCPA is a chemical compound which has the structural formula



(PTO, Uncontested Fact No. 14, in part)

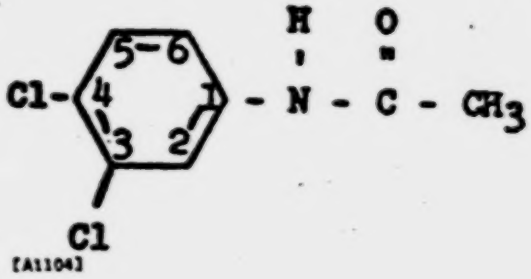
This chemical is a member of a class of compounds known as "anilides". It is a "dichloro" compound since the 3,4-DCPA molecule includes two chlorine atoms; hence it is a "dichloroanilide". The numbers 3 and 4 refer to the particular corners of the hexagonal ring of carbon atoms (benzene ring) to which the chlorine atoms are attached. By an accepted chemical numbering system, the corners of this ring may be numbered as indicated in the formula. (PTO, Uncontested Fact No. 15).

7. 3,4-DCPA is marketed extensively by both parties as a selective post-emergence herbicide. (PTO, Uncontested Facts Nos. 41 and 43).

A "selective post-emergence herbicide" is one which, when applied after emergence to a crop and weeds normally associated therewith, substantially destroys the weeds without adversely affecting the crop. (McRae, Notes of Trial Testimony 304).

8. A "homolog" of 3,4-DCPA is a chemical compound of the same series as 3,4-DCPA, whose structure differs from 3,4-DCPA in that it contains a different number of $-CH_2-$groups. A "higher" homolog of 3,4-DCPA has more $-CH_2-$groups, and a "lower" homolog has fewer $-CH_2-$ groups. When a homolog of 3,4-DCPA differs in structure from 3,4-DCPA by only one more or one less $-CH_2-$ group, it is an "adjacent" or "next" homolog of 3,4-DCPA. (PTO, Uncontested Fact No. 29).

9. 3',4' -dichloroacetanilide[4] has the structural formula



[A1104]

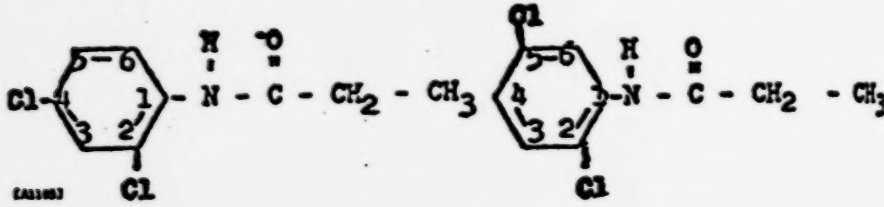
It is the adjacent or next lower homolog of 3,4-DCPA since it differs in structure solely by having one less $-CH_2-$ group. (PTO, Uncontested Fact No. 30).

10. An "isomer" of 3,4-DCPA is a chemical compound having the same composition as 3,4-DCPA, i.e., the same kinds and numbers of atoms, but with those atoms differently arranged in the molecule. A "ring position" isomer

4. Hereafter, reference to this chemical compound will be made in the shortened form of "3-4-DCAA".

of 3,4-DCPA is a chemical compound having the same basic propionanilide structure and number of chlorine atoms attached to the benzene ring, but having at least one of the chlorine atoms affixed to a different corner of the benzene ring. (PTO, Uncontested Fact No. 31).

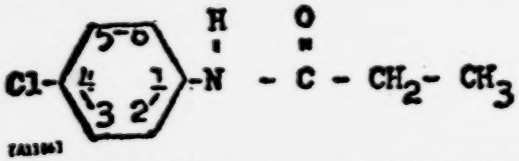
11. 2′,4′-dichloropropionanilide and 2′,5′ -dichloropropionanilide are ring position isomers of 3,4-DCPA and have the following formulae, respectively



(PTO, Uncontested Fact No. 32)

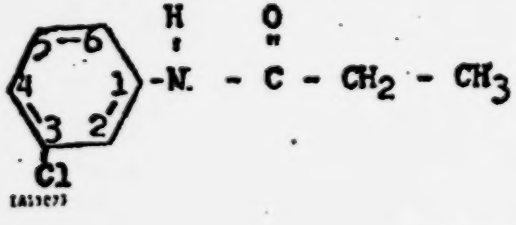
12. An "analog" of 3,4-DCPA is a compound which is not a homolog or isomer of 3,4-DCPA although its structure is closely related to, but different from, the structure of 3,4-DCPA. (PTO, Uncontested Fact No. 33).

13. 4′ -chloropropionanilide has the structural formula



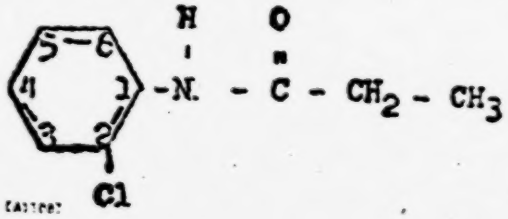
It is an analog of 3,4-DCPA. Accepted technical names for 4′ -chloropropionanilide are p-chloropropionanilide and para-chloropropionanilide. (PTO, Uncontested Fact No. 34).

14. 3′ -chloropropionanilide has the structural formula



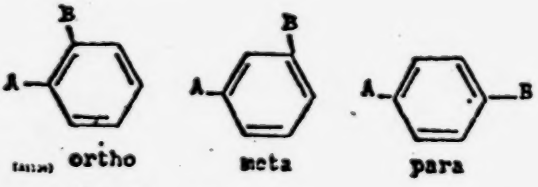
It is an analog of 3,4-DCPA. Accepted technical names for 3′ -chloropropionanilide are m-chloropropionanilide and meta-chloropropionanilide. (PTO, Uncontested Fact No. 35).

15. 2′ -chloropropionanilide has the structural formula



It is an analog of 3,4-DCPA. Accepted technical names for 2′ -chloropropionanilide are o-chloropropionanilide and ortho-chloropropionanilide. (PTO, Uncontested Fact No. 36).

16. Ortho-, meta- and para- compounds are substituted products derived from benzene in which two of the substituting radicals or groups are structurally placed in certain defined positions on the benzene nucleus. When two substituting groups (A and B) are in such position that they are attached to adjoining carbon atoms of the benzene nucleus, they are said to be in ortho- or o-position to each other. If A and B are so attached that they have a third carbon atom of the nucleus between them, a meta- or m-compound results. If A and B are attached to opposite atoms in the nucleus (two other carbon atoms between them), a para- or p- compound results. The following formulae are illustrative:



(PTO, Uncontested Fact No. 37)

C. THE PATENT IN SUIT

17. The patent in suit, No. 3,382,280, issued May 7, 1968 on an application filed in the Patent Office on February 3, 1967 bearing Serial No. 613,738. (PTO, Uncontested Fact No. 1, in part).

18. The patent in suit contains a single claim which reads "3′,4′ -dichloropropionanilide". It states that 3,4-DCPA possesses "unusual and valuable herbicidal activity" (PX-1, col. 1, lines 44-55) whereas "related compounds possess little or no herbicidal efficiency" (PX-1, col. 3, line 73). The patent granted is 3,4-DCPA, per se, without restriction to its "unusual and valuable herbicidal activity". If this patent is sustained, it would entitle Monsanto to exclude 3,4-DCPA from the public domain until May 7, 1985. (35 U. S. C. § 154).

19. Monsanto filed two other applications relevant to the case at bar prior to its 1967 application. (DX-2 and DX-3). In each of Monsanto's three applications, Dr. Clarence Huffman was named as the inventor. (PTO, Uncontested Fact No. 5, in part).

20. In 1958, through 1962, Rohm and Haas attempted to patent 3,4-DCPA as a compound and the Patent Office rejected its claim as unpatentable over the prior art. (See PTO, Uncontested Facts Nos. 49, 60, 61).

1. Monsanto's First Application.

21. The first Huffman application, Serial No. 661,575 (DX-3), was filed on May 27, 1957. It claimed both the herbicidal compositions of chemical compounds and the use of these compounds to destroy undesired plants. (DX-3, pp. 21-24).

22. At no time during the prosecution of Huffman's first application were any claims presented to the Patent

Office directed to a chemical compound per se. (PTO, Uncontested Fact No. 8). Such claims were included in a draft of this application but were omitted by Monsanto from the application as filed. (DX-54; Peterson, designated Deposition 175-176;[5] Huffman, Notes of Trial Testimony 181-182, 185-186).[6]

23. This application disclosed a large class of 3,4-dihalogenated anilides, including 3,4-DCPA, and also stated that the members of said class possessed "unusual and valuable herbicidal activity." (PTO, Uncontested Fact No. 7, in part). This 1957 application asserted that each compound included within the huge class of anilides (McRae, N. T. 333-34; Price, N. T. 492) possessed "unusual and valuable herbicidal activity" (DX-3, p. 2, lines 1-4), while related compounds possessed "little or no herbicidal efficiency" (DX-3, p. 12, lines 1-19). Huffman confirmed this "unusual and valuable herbicidal activity" of all compounds included within the broad claim language (Huffman, N. T. 144, 156-8, 166-71, 174).

24. A somewhat narrower class of 3,4-dichloroanilides comprising about one hundred compounds was also disclosed in the 1957 application, each member of which was stated to possess "outstanding utility" as a herbicide (DX-3, p. 3, lines 1-5; Huffman, N. T. 171-2). This class included not only 3,4-DCPA but also its adjacent lower homolog, 3,4-DCAA.

25. The 1957 application not only stated that all the 3,4-dihaloanilides disclosed had "unusual and valuable herbicidal activity" but also referred to the activity as post-emergence or pre-emergence, selective or non-selective —"just any and all kinds of activity" (Huffman, N. T. 44-45).

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5. Hereafter, depositions designated by the parties as part of the record in this case will be referred to as "Dep."

6. Hereafter, references to the Notes of Trial Testimony will be abbreviated "N. T."

26. The United States Patent Office, in four separate office actions, rejected all of Huffman's claims, both those embracing methods of using and compositions containing 3,4-DCPA, as unpatentable over the prior art disclosures (DX-3, pp. 26-7, 34-5, 45-6, 51-2).

II. Monsanto's Second Application.

27. On May 8, 1961 Monsanto filed a second application in Huffman's name as a continuation-in-part of its 1957 application and thereupon abandoned the latter. This second application also claimed both the compositions of herbicidal compounds and the use of those compounds to destroy undesired plants. (DX-2).

28. The 1961 application disclosed a large class of 3,4-dihalogenated anilides, including 3,4-DCPA and 3,4-DCAA, and also stated that the members of said class possessed "unusual and valuable herbicidal activity", and that 3,4-DCPA, 3'4'-dichloroisobutyranilide and 3'4'-dichloromethacrylylanilide were useful as selective post-emergent herbicides for rice. (Uncontested Fact No. 9, in part).

29. Rohm and Haas' South African Patent No. 309/59 describing and claiming 3,4-DCPA as selective, post-emergence herbicide was granted in May, 1959. Monsanto had obtained a copy of this patent by September 10, 1959. (PTO, Uncontested Fact No. 22). In January, 1960, representatives of Monsanto attended the Southern Weed Conference where a report by Dr. Roy Smith of the U. S. Department of Agriculture was given describing 3,4-DCPA as a selective, post-emergence herbicide for the control of weeds in rice. A printed report by Dr. Roy Smith, entitled "Proceedings, Thirteenth Annual Meeting of the Southern Weed Conference", describing 3,4-DCPA as a selective post-emergence herbicide for the control of weeds in rice was published in April, 1960. (PTO; Uncontested Fact No. 23). Monsanto learned as early as April 7, 1961 that Rohm

and Haas had sold 3,4-DCPA as a selective, post-emergence herbicide. (PTO, Uncontested Fact No. 26).

30. The 1961 Huffman application was filed more than twenty months after issuance of Rohm and Haas' South African patent, more than fifteen months after Monsanto attended the Southern Weed Conference, thirteen months after publication of the weed conference proceedings and one month after Monsanto had learned that Rohm and Haas had begun selling 3,4-DCPA as a post-emergence, selective herbicide. (Findings of Fact Nos. 27 and 29).

31. The Patent Office rejected the claims of this second application as unduly broad and unpatentable over the prior art (DX-2, pp. 29-31, 44-46).

32. No claim in Dr. Huffman's second application as filed was directed to a chemical compound per se. On November 14, 1962, the Patent Office suggested to Monsanto an allowable claim "for purpose of interference", which claim corresponded to claim 9 of Wilson et al's patent application Serial No. 96,089 filed March 16, 1961 by Wilson and McRae, assignors to Rohm and Haas. This was the first claim to a method of using or a composition containing 3,4-DCPA which was indicated as allowable either to Monsanto or Rohm and Haas during the prosecution of any of their patent application. The claim read as follows:

> "A method for selectively inhibiting growth of undesirable plants in an area containing growing undesirable plants in an agronomic crop, which comprises applying to said area 3,4-dichloropropionanilide at a rate of application which inhibits growth of said undesirable plants and which does not adversely affect the growth of said agronomic crop." (PTO, Uncontested Fact No. 10)

33. Interference No. 93,751 was declared August 21, 1963, to determine who was the first to invent the method of claim recited in Finding of Fact 32 (PTO, Uncontested

Fact No. 62, in part). During the interference, in conjunction with its motion to add counts, Monsanto submitted an amendment on March 30, 1964, to include in its 1961 application the claim "the compound 3',4'-dichloropropionanilide" (claim 24) (DX-2, p. 63). This amendment was not entertained by the Patent Office which denied the motion to add (DX-2, p. 65). Monsanto delayed for almost three additional years, i.e., until it filed DX-1, the third Huffman application, in February 1967, any attempt to patent 3,4-DCPA as a compound.

III. Monsanto's Third Application.

34. The third Monsanto application, which issued as the patent in suit, was filed on February 3, 1967. This third application was examined by a different examiner than its two previous applications (Cole, N. T. 788).

35. Unlike the two earlier Monsanto applications, the 1967 one asserted that only 3,4-DCPA had "unusual and valuable herbicidal activity" (DX-1, pp. 1-2). Monsanto asserted that the activity of this new compound was "surprising" because "related compounds possess little or no herbicidal efficiency" (DX-1, p. 7, lines 1-2). Monsanto listed "some" of these related compounds in the 1967 application (DX-1, p. 7), but omitted reference to more closely related compounds described in its earlier applications as having "unusual and valuable herbicidal activity". (Huffman, N. T. 100-101, 160-4, 169-70).

36. The new examiner rejected the single compound claim in the 1967 Monsanto application as obvious over the prior art disclosing homologs and isomers of 3,4-DCPA, including 3,4-DCAA and 2,4-dichloropropionanilide (DX-1, p. 19).

37. In its attempt to persuade the Patent Office that 3,4-DCPA was patentable over such prior art compounds, Monsanto, in the course of prosecuting this third applica-

tion, filed on or about November 9, 1967, the affidavit of Dr. Robert F. Husted. (DX-1, pp. 47-50). This affidavit was drafted by one of Monsanto's patent attorneys and was based upon tests performed by Dr. Husted on about 20 plant species at three different rates of application per acre. The results of these tests were reported by Husted to counsel by letter with attached charts (DX-22). The affidavit only reports the results of tests of *10 compounds applied to 11 plant species at the rate of 2 lbs. per acre of application.* The results were that 3,4-DCPA completely killed or severely injured 9 of the 11 species and failed to have any effect on only 2. By contrast, 8 other compounds were reported to have no effect on any of the 11 plants and two other compounds, one of them 3,4-DCAA, either had very slight effect or no effect.

A comparison of the affidavit (DX-1, pp. 47-50) with the letter and charts forwarded to counsel by Husted (DX-22) reveals the following (Cole, N. T. 787-813):

1. The affidavit states that 3,4-DCPA completely kills radishes at 2 lbs. per acre, earning a "4" rating (DX-1 p. 49). The charts attached to Husted's letter to counsel reveal that 3,4-DCPA only has moderate herbicidal value at 2 lbs. per acre, earning a "2" rating (DX-22, last page).

2. The charts in DX-22 indicate that at 2 lbs. per acre 3,4-DCAA has complete kill value on pigweed, earning a rating of "4" (DX-22, next to last page). The affidavit completely omits the results of this test. (DX-1, p. 49).

3. The affidavit fails to contain the results of tests where a compound other than 3,4-DCPA attained a rating higher than "1". (DX-1, p. 49). The second to last chart in DX-22 reveals that at 2 lbs. per acre, three compounds other than 3,4-DCPA achieved a rating of "2" which means a moderate herbicidal value.

4. The affidavit reports that 3,4-DCPA at 2 lbs. per acre achieved a "3" or "4" rating on all plants species except one where it achieved a "0" rating (DX-1, p. 49). DX-22

reveals that at 2 lbs. per acre 3,4-DCPA had a rating of less than 3 on several plant species, which results were not reported in the affidavit.

5. The affidavit fails to contain the results of Husted's testing at other than 2 lbs. per acre. (DX-22, first four charts). These show that 3,4-DCPA is somewhat less active at rates other than 2 lbs. per acre.

In addition to the above, the Huffman and Allen article (DX-8) reports the results of tests on various crops at 8 lbs. per acre of application and shows that 3,4-DCAA exhibits high herbicidal activity. This article, as well as the results of the tests in DX-22, were not brought to the attention of the patent examiner (Cole. N. T. 811).

These omissions were intentionally and deliberately made to mislead the patent office into believing that 3,4-DCPA had outstanding herbicidal value as compared to related compounds. The Husted affidavit failed to state facts necessary to be stated in order to make Monsanto's representation to the Patent Office, taken as a whole, not misleading.

38. About 3 months after the filing of the Husted affidavit, on February 20, 1968, Monsanto was notified that its claim to 3,4-DCPA was allowed by the Patent Office (DX-1, p. 37), and on May 7, 1968, the patent was issued.

D. The Prior Art.

39. The following are patents and printed publications which were patented or published before May 27, 1956:

a) Bienert Patent No. 2,133,340, dated October 18, 1938 (DX-68)

b) FIAT Final Report No. 1313, dated February 1, 1948 (PB 85172), cover page and pp. 273, 321 and 375 (DX-69)

c) Fontein Recueil Des Travaux Chimiques Des Pays Bas 47, pp. 635-667 (1928) (DX-70)

d) Chattaway, J. Chem. Soc. Trans. 81, pp. 637-44 (1902) (DX-71)

e) Beilstein, Handbuch der Organischen Chemie, 4th Ed., Vol. 12, pp. 622-69, Berlin, Springer (1929) (DX-72)

f) Shaw et al. "Weeds", Vol. 2, pp. 43-65 (1953) (DX-73)

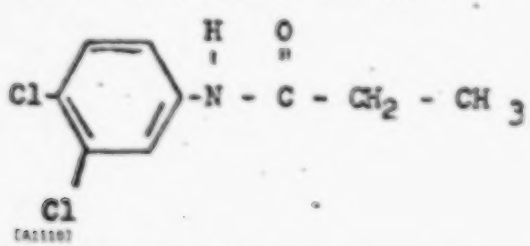
g) "Plant Regulators" CBCC Positive Data Series No. 2, June 1955, Publication 384, cover page and pp. a, b, c, l, 39 and 40 (DX-74)

h) Todd Patent No. 2,655,445, dated October 13, 1953 (DX-75)

i) King Chemicals Evaluated as Insecticides and Repellants at Orlando, Fla., U. S. Department of Agriculture Handbook No. 69, pp. 2, 3, 24, 25 and 285, Wash., D. C. U. S. Government Printing Office, 1954 (DX-83).

(PTO, Uncontested Fact No. 39)

40. These references do not recite the specific name "3'4'-dichloropropionanilide" as such, nor do they portray the following specific chemical structure:



(PTO, Uncontested Fact No. 28, in part)

41. All six of the homologs, isomers, and analogs of 3,4-DCPA set out in Findings 9, 11, 13, 14 and 15 above, as well as seven others, were specifically described in the published prior art before May 27, 1956. (PTO, Uncontested Fact, No. 38). These homologs, isomers and analogs im-

plicitly describe 3,4-DCPA and its formula to one skilled in the art (McRae, N.T. 341-346; Price, N.T. 544-62, 565).

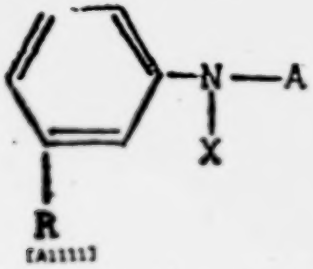
42. The prior art homologs, isomers and analogs described in the preceding Findings rendered the chemical compound 3,4-DCPA structurally obvious to a person having ordinary skill in the art at the time the alleged invention was made. (McRae, N.T. 341-46; Urry, N.T. 867-68).

43. Bienert specifies that the acylamino group can be either acetylamino or propionylamino (DX-68, p. 1, col. 2, lines 1-12). The small number of so-described 3,4-dichlorobenzenes would include 3,4-DCPA and 3,4-DCAA. The procedure taught in this patent to make the described pigments can start with either 3,4-DCAA as shown by FIAT Final Report No. 1313, dated February 1, 1948 (DX-69), or with 3,4-DCPA, the next higher homolog of 3,4-DCAA, to produce phthalocyanine pigments having "extremely close" properties (Price, N.T. 522-33; Urry, N.T. 901-02). 3,4-DCPA was used by Dr. Price in the reaction disclosed by FIAT and a pigment was obtained having properties "very similar" to those of the pigment made from 3,4-DCAA.
(Price, N.T. 534-39).

44. Chattaway, J. Chem. Soc. Trans. 81 (1902), pages 637-644, (DX-71), describes the migration of a chlorine atom from the nitrogen to the para and then the ortho positions in propionanilide and chlorinated propionanilides, including that derived from 3-chloroaniline wherein the meta position is already substituted by chlorine (page 637). The products obtainable by Chattaway's method constitute a small group of ten chloropropionanilides, one of which is 3,4-DCPA obtained from 3-chloroaniline. (Price, N. T. 548-49, 552). The reaction that Chattaway gives is very similar

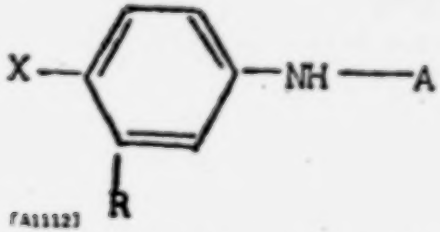
to the one that can be applied to the production of propanil. (Urry, N.T. 904-05).

45. Fontein, Recueil Des Travaus Chimiques Des Pays Bas 47 (1928), pages 635-667, (PX-70), describes the reaction velocity measurement of intramolecular changes in a group of compounds having the formula:



[A11111]

wherein X is chlorine or bromine, A is formyl, acetyl, propionyl, butyryl or benzoyl, and R is hydrogen, chloro, bromo or methyl (page 638). The changes under study are migration of X from the nitrogen atom (N) to the 4- or para-position on the phenyl nucleus thereby producing compounds having the formula:



[A11112]

wherein X, R and A are defined as above (pages 644, 654, 657, 663). Fontein indicated a preference for compounds of this second formula wherein X is chlorine and included specific reference to the production of 3,4-DCAA (page 663). (Price, N.T. 560; Urry, N.T. 905). Using propionyl in lieu of acetyl, 3,4-DCPA will be obtained (Price, N.T. 566-61; Urry, N.T. 906-07).

46. 3,4-DCAA is a prior art compound, specifically described in the literature before Huffman first prepared 3,4-DCPA.

47. Both 3,4-DCAA and 3,4-DCPA have properties which make them useful in the production of pigments (See Finding of Fact No. 43, *supra*).

48. Both 3,4-DCAA and 3,4-DCPA have herbicidal properties (See DX-22; Findings of Fact Nos. 23, 24 and 37, *supra*).

49. The use of 3,4-DCAA and 3,4-DCPA as herbicides, whether selective or non-selective, was not revealed or in any way suggested in the prior art before May 27, 1956.

Opinion.

The parties have submitted an agreed statement of contested legal issues in this case. (PTO, Agreed Statement of Contested Legal and Factual Issues). We will decide the following issues:[7]

(1) Was the chemical compound 3,4-DCPA *obvious* within the meaning of 35 U. S. C. § 103?

(2) Did Monsanto *deliberately misrepresent or withhold material facts in order to mislead the patent office* during the prosecution of the patent in suit so as to render the patent invalid or unenforceable?

(3) Did Monsanto *constructively abandon* its application for a patent or was it guilty of *laches* in asserting any right it had to a patent?

(4) Was the chemical compound 3,4-DCPA *anticipated* within the meaning of 35 U. S. C. § 102(a) and (b)?

(5) Did Monsanto fail to comply with 35 U. S. C. § 112?

1. Obviousness.

Under 35 U. S. C. § 103, a patent may not be obtained "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter

7. The only issue we are not deciding is whether Dr. Huffman was the inventor of the compound in question.

as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains". Within the framework of this general rule, a line of cases has developed concerning the obviousness of an allegedly new chemical compound where an isomer, analog or homolog of that compound has been disclosed in the prior art.

The genesis of these cases is Application of Henze, 181 F. 2d 196 (CCPA 1950).[8] In that case, the applicant sought to patent a certain chemical compound over its prior art homolog because the claimed compound was found to possess a new property. The prior art homolog also possessed this "new" property, though the property was not described in the prior art. The Court of Customs and Patent Appeals affirmed the rejection of the applicant's claim, holding that a presumption of unpatentability arises where the homolog of a claimed compound is disclosed in the prior art. To rebut this presumption it must be shown "that the claimed compound possessed unobvious or unexpected beneficial properties not actually possessed by the prior art homologue. It is immaterial that the prior art homologue may not be recognized or known to be useful for the same purpose or to possess the same properties as the claimed compound." 181 F. 2d at 201.

The theory underlying the *Henze* rule is basic to the law of patents, namely that an old product with a new use cannot be patented but rather the new use must be patented. More specifically, the theory of *Henze* is that a compound and its homolog are so close chemically that where the homolog is disclosed in the prior art and has *in fact* the "new" property of the claimed compound, the claimed compound is in the public domain for all purposes and can no longer be patented as a compound regardless of newly discovered properties. The applicant in this situation is

8. See also In re Hass, 141 F. 2d 122 (1944).

protected by the patent law, however, because he may patent the newly discovered use.

Numerous cases have arisen since *Henze* with similar factual situations.[9] Plaintiff argues that some of these cases, particularly In re Papesch, 315 F. 2d 381 (1963) and Commissioner of Patents v. Deutsche Gold-und-Silber-Scheideanstalt Vormals Roessler, 397 F. 2d 656 (1968), have so watered down *Henze* that it is no longer the applicable law. While we find that the cases subsequent to *Henze* are not easily reconcilable, if reconcilable at all, we disagree with plaintiff's contention and conclude that *Henze* is still the controlling law in this area.

This conclusion is buttressed by the recent case of In re Mod, 408 F. 2d 1055 (C. C. P. A. 1969). In that case, the applicants sought to patent certain compounds over a prior art disclosure of isomers and homologs on the ground that the claimed compounds possessed a novel property not disclosed by the prior art. The patent examiner found that the prior art homologs and isomers possessed the same novel property as the claimed compounds and, relying on *Henze*, rejected the applicants' claims as obvious. The Board of Patent Appeals affirmed the examiner. The Court of Customs and Patent Appeals affirmed the Board of Patent Appeals on the grounds that (1) the claimed compounds and the prior art compounds possessed a close structural relationship *and* (2) the claimed compounds possessed the same properties as those for which the prior art compounds were useful. This decision reaffirms at least the theory underlying *Henze* and would appear to add another factor to consider in this area, namely whether the

9. Many of these cases are cited and discussed in In Re Papesch, 315 F. 2d 381 (1963), and Commissioner of Patents v. Deutsche Gold-und-Silber-Scheideanstalt Vormals Roessler, 397 F. 2d 656 (1968). There is little we can add to these exhaustive opinions.

new compound possesses the same property which the prior art compound was known to possess. *Henze*, it will be remembered, held that the important factor in deciding patentability was whether the prior art compound possessed the same "new" property as the claimed compounds, though this "new" property was not disclosed in the prior art. *Mod* would appear to take the other side of that coin in relying on the fact that the allegedly new compound has the same property for which the prior art compounds were known. In final analysis, the combined effect of *Mod* and *Henze* seems to be that a compound is unquestionably in the public domain and cannot be patented, even though it possesses properties not disclosed by the prior art, if:

(1) the claimed compound is structurally obvious from prior art homologs, isomers and analogs;

(2) the claimed compound possesses the same property for which the prior art compounds were useful; and

(3) the prior art compounds in fact possess the newly discovered property of the claimed compound.

In the case before us, all three of the above factors are present: (1) 3,4-DCPA is structurally obvious from its prior art homolog, 3,4-DCAA, as well as from its isomers and analogs (Finding of Fact No. 42);

(2) Both 3,4-DCAA and 3,4-DCPA are useful in the production of pigments (Findings of Fact Nos. 43 and 47);

(3) Both 3,4-DCAA and 3,4-DCPA have herbicidal properties (Finding of Fact No. 48).

Under these circumstances we hold that the compound 3,4-DCPA is "obvious" within the meaning of 35 U. S. C. § 102. As a compound 3,4-DCPA was for all purposes in the public domain and cannot be patented as a compound. As we have noted above, the inventor of the novel property of the compound is not without recourse since he may patent the use of 3,4-DCPA as a selective post-emergence herbicide.

Plaintiff further argues that even though 3,4-DCPA and 3,4-DCAA both have herbicidal properties, 3,4-DCPA is so far superior to 3,4-DCAA in terms of usefulness as a herbicide that plaintiff's patent is justifiable on this ground. While this argument may be compelling in the market place, we do not find it compelling as a matter of patent law in this case. In *Henze* and *In Re Loring Coes*, 173 F. 2d 1012 (1949), the courts held that the unobvious properties of the claimed compound must be "markedly superior" to the prior art compounds, and not merely different in degree, in order to justify a patent on the compound. The reason for this rule was stated by *Henze* as follows: "[T]he characteristics normally possessed by members of a homologous series are principally the same, and vary but gradually from member to member. Chemists knowing the properties of one member of a series would in general know what to expect in adjacent members". 181 F. 2d at 201. We find both the rule and reason for it applicable here. Monsanto, in its earlier applications, stated that 3,4-DCAA had unique herbicidal value (see Findings of Fact Nos. 24 and 28). Moreover, Monsanto by its very own tests shows that 3,4-DCAA has some herbicidal value (see DX-8 and DX-22), depending on the rate of application and the plant species to which it is applied. Hence, the difference between 3,4-DCPA and 3,4-DCAA is only one of degree and the value of each as a herbicide depends to a large extent on rate of application and the plant to which it is applied. A patent monopoly on the substance of 3,4-DCPA cannot be justified because it is a better or more useful herbicide at some rate of application on certain plants.

As we have noted above, plaintiff's argument that *Henze* is no longer the controlling law in this area is primarily based on the cases of *In Re Papesch*, *supra*, and the *Deutsche* case, *supra*. We feel that these cases are dis-

tinguishable from *Henze* and *Mod.* Those cases dealt with the situation of the claimed compound being structurally obvious from the prior art compounds. They did *not* involve the similarity of properties which we have before us. *Papesch* and *Deutsche* stand for the proposition that the structural obviousness of the claimed compound from prior art compounds is insufficient *by itself* to find that the subject matter as a whole is obvious within the meaning of 35 U. S. C. § 103. As we have discussed above, this case is more than just a case of structural obviousness.

Moreover, even if this were only a case of structural obviousness, we would be disposed to hold that this in and of itself should preclude issuance of a patent. It is basic to the grant of a patent that the scope of a patent should not exceed the scope of invention. If what makes a structurally obvious chemical substance patentable is the new and unobvious properties or uses discovered by the first person to compound the substance, the discoverer should have protection on what he discovered, *i.e.*, the new properties of the substance, but should not be entitled to a 17-year monopoly on the substance itself. To say that a person who has discovered a new use for a structurally obvious compound, which compound would not have been entitled to any patent protection absent the new use, should receive a patent on the compound itself is to extend the patent monopoly far beyond the reason for its existence. We think that the purposes of the patent law will be adequately served if patents on compounds which are structurally obvious from the prior art are limited to method patents directed to the new and useful characteristic or property which is the essence of the discovery or invention. In this case the actual advance of the art is the discovery of 3,4-DCPA as a herbicide. This fact was neither obvious nor predictable from the prior art. To a reasonably skilled chemist, the chemical formula and structure of 3,4-DCPA

was obvious from the formula and structure of 3,4-DCAA. Such a chemist would also expect both compounds to have similar properties. Both compounds can be easily produced by using known chemicals and methods of synthesis. Hence there was nothing characteristic of invention in the routine compounding of 3,4-DCPA. Dr. Huffman himself testified that 3,4-DCPA was synthesized by his assistant using old and known methods and compounds (Huffman, N. T. 57). The "invention" was discovering 3,4-DCPA's peculiar characteristics as a herbicide. The question of whether Dr. Huffman is entitled to a process patent on the use of 3,4-DCPA as a herbicide is now before the patent office in an interference involving the same parties and is not before this court.

II. Misrepresentation.

Defendant secondly alleges that Monsanto's patent is invalid because Monsanto withheld from the Patent Office material facts which made its application, taken as a whole, misleading. More specifically, Rohm and Haas alleges that Monsanto, in its attempt to persuade the Patent Office of the unobviousness of 3,4-DCPA as a herbicide, deliberately failed to present complete data with respect to the herbicidal efficacy of closely related compounds, thereby intending to mislead the Patent Office. These facts are material, it is argued, because had they been presented no patent would have issued.

The facts most relevant for the purposes of this issue may be found in Finding of Fact No. 37.[10] It is our conclusion that Rohm and Haas has proved that the Husted affidavit, filed on November 9, 1967, presented to the Patent Office incomplete data, carefully and intentionally chosen to support the position that 3,4-DCPA possessed unique herbicidal properties not possessed by closely related com-

10. See also Finding of Fact No. 35.

pound. Although the affidavit contains no affirmative misrepresentation and is accurate so far as it goes,[11] it is misleading, and was intended to be misleading, in that it fails to state facts known to the applicant which were inconsistent with its position that propanil is a superior herbicide. It is, in short, composed of half-truths. The facts not stated would tend to show that closely related compounds do have more than just slight herbicidal value depending on the rate of application and the plant species to which the compounds are applied. The omitted facts also tend to show that 3,4-DCPA is not so clearly superior as a herbicide to closely related compounds. For example, one omitted test result showed that 3,4-DCAA had a complete kill on pigweed at 2 lbs. per acre of application, just as 3,4-DCPA did. These facts are material because if these closely related compounds, particularly 3,4-DCAA, possess little or no herbicidal value, then the *Henze* doctrine might become inapplicable and a patent on the compound 3,4-DCPA might properly be granted notwithstanding the disclosure of closely related compounds in the prior art.[12] As we discussed above, *Henze* precludes a patent compound where a closely related compound disclosed in the prior art actually possesses the new and unobvious property of the claimed compound. Monsanto, by the Husted affidavit, attempted to show that closely related compounds do not possess unique herbicidal properties. The facts not stated were, therefore

11. We have concluded that there is insufficient evidence to prove that Monsanto intentionally made false statements of fact to the Patent Office. Although the Husted affidavit states that 3,4-DCPA completely kills radishes and DX-22 reveals that it only has moderate herbicidal value, we cannot say that this misstatement was intentional. However, there is sufficient evidence to prove that Monsanto intentionally omitted material facts and that it thereby intended to mislead the Patent Office.

12. The *Mod* decision, which in our opinion adds another factor to consider in this area, was decided in April of 1969 and therefore after the Husted affidavit. Hence, Monsanto, at the time of the Husted affidavit, was only concerned with the *Henze* line of cases.

material. Unquestionably the Patent Office also though they were material because it placed substantial weight on the Husted affidavit when, after first rejecting the claim, it decided to issue a patent 3 months after the Husted affidavit was filed."[13]

The above facts raise the question of whether a patent is invalid because the applicant intentionally fails to state material facts in order to mislead the Patent Office. We have decided that this question must be answered in the affirmative.

Under the decisions of the Supreme Court, one who is sued for patent infringement may challenge the validity of the patent on the ground that it was fraudulently procured or because the patentee was guilty of some other inequitable conduct or bad faith in his proceedings before the Patent Office. Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp., 382 U. S. 172 (1965); Precision Instrument Mfg. Co. v. Automotive Maintenance Co., 324 U. S. 806 (1945); Hazel-Atlas Co. v. Hartford-Empire Co., 322 U. S. 238 (1944); Keystone Driller Co. v. General Excavator Co., 290 U. S. 240 (1933). See also Chas. Pfizer & Co. v. FTC, 401 F. 2d 574 (6th Cir. 1958), *cert. denied*, 394 U. S. 920 (1969); Technograph Printed Circuit, Ltd. v. Bendix Aviation Corp., 218 F. Supp. 1, 46 (D. C. Md. 1963).

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13. Although Monsanto insists that any omitted facts were not material, they have stated to the contrary on the record. In their statement of Contested Facts and Issues, included in our Pre-trial Order, Monsanto states that the reason why Rohm and Haas was denied a patent on 3,4-DCPA was because it failed to submit data comparing 3,4-DCPA with closely-related compounds. Monsanto urges that it received a patent because it submitted this data, which showed that propanil had significantly greater qualities as a herbicide than closely-related compounds. It is this very data which is in issue. See PTO, Plaintiff's Statement of Contested Issues of Fact and Law, pp. 5-6, Nos. 15-19.

aff'd 327 F. 2d 497 (4th Cir.), *cert. denied* 379 U. S. 826 (1964): Union Carbide & Carbon Corp. v. Stuart Laboratories, 194 F. 2d 823, 827 (3d Cir.), *cert. denied*, 343 U. S. 967 (1952); Monolith Portland Midwest Co. v. Kaiser Alum. & Chem. Corp., 267 F. Supp. 726, 786 (S. D. Cal. 1966), *modified on other grounds*, 407 F. 2d 288 (9th Cir. 1969). The theory of this defense of fraudulent procurement is the equitable doctrine of "unclean hands" and is rooted in considerations of public policy. As the Supreme Court said in the *Precision Instrument* case at page 816:

> "A patent by its very nature is affected with a public interest. . . . [I]t is an exception to the general rule against monopolies and to the right to access to a free and open market. The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope."

We have concluded that the decisions of the Supreme Court require the highest degree of scientific candor on the part of patent applicants in their dealings with the Patent Office. We believe this standard forbids not only the affirmative making of false statements of material fact, but also the suppression of facts known to the applicant which are inconsistent with statements made by the applicant in pursuit of a patent. The patent applicant should be held to the same standard of truthful disclosure to the Patent Office that Congress has required of the seller of securities to the public. Under the securities law, one who sells or offers securities for sale must not omit to state in his registration statement, prospectus, or any other communication directed to the public any material fact necessary to be stated in order to make the communication taken as whole,

not misleading. The same standard of candor should also apply to the patent applicant and, when deliberately violated in order to mislead, should result in the denial of a patent. The 17-year monopoly of a patent is a major exception to our basic concepts of free enterprise and the burden ought to be on the applicant to show that he truly has made a discovery which warrants a monopoly. The Patent Office should not be put to the trouble of deciding whether to issue a patent on the basis of incomplete and distorted data. It would clearly be against public policy to countenance the issuance of a patent based upon an application which omits to state facts which make the application taken as a whole misleading. The plaintiff's intentional failure in this case to state material facts, whereby it misled the Patent Office, was sufficiently inequitable to invalidate its patent. To distinguish the making of false statements of material fact to the Patent Office from misleading omissions of material fact would be to invite the kind of deception that occurred here. We conclude that there is no rational basis for a distinction between affirmative misrepresentations and misleading omissions.

Plaintiff argues, however, that the standards of disclosure under the securities act, even if deliberately breached, should not apply to the patent applicant because the purpose of those standards is to prevent the inexpert investing public from being misled. The Patent Office, on the other hand, has the expertise necessary to decide whether to issue a patent without requiring complete scientific candor from patent applicants. We find this argument to be without merit for two reasons. First, the public does have an interest in seeing that 17-year monopolies are not given without a full and complete airing of all relevant facts. This public interest cannot be diminished by the fact that it is not as directly involved in the patent process as the investing public is in the process of the sale of a

security. Second, the Patent Office cannot possibly have a detailed technical expertise in every scientific area without relying to some degree on the scientific candor of patent applicants. It cannot be expected to perform tests and experiments to determine whether an applicant's alleged invention is in fact an invention. Further, since patent application proceedings are not ordinarily adversary proceedings, the Patent Office must rely on the tests and experiments and good faith of the applicant."

Plaintiff also urges that any omission to state facts on its part was not material to the issuance of a patent. Although we have found the omission to be material, we are compelled to point out that lack of materiality would not necessarily preclude us, as a Court in Equity, from holding the patent in suit invalid. It has been held that affirmative misrepresentations by a patent applicant, made with the intent to deceive, even if not material, is grounds to refuse the enforcement of a patent because the applicant is thereby tainted with unclean hands. *Corning Glass Works* v. *Anchor Hocking Glass Corp.*, 253 F. Supp. 461 (D. D. Del. 1966), *rev'd on other grounds*, 374 F. 2d 473 (3d Cir. 1967). The doctrine of unclean hands is equally applicable to the intentional withholding of facts to mislead the Patent Office. As the Court said in *Corning*, *supra*, at 470 "Absolute honesty and good faith disclosure is necessary." This rule of absolute candor with the Patent Office is a salutary one in that it should encourage the applicant, where the materiality of facts is in question, to resolve all doubts in favor of disclosure.

14. Appropriate in this regard is the statistical notation by the Supreme Court in Graham v. Deere, 383 U. S. 1, 18 (1966) that "the Patent Office is confronted with a most difficult task. Almost 100,000 applications for patents are filed each year. Of these, about 50,000 are granted and the backlog now runs well over 300,000. 1965 Annual Report of the Commissioner of Patents 13-14."

It is our conclusion, therefore, that the patent applicant in processing his application must not omit to state material facts known to the applicant for the purpose of misleading the Patent Office. If the applicant does, his patent will be invalidated as procured inequitably and contrary to public policy. Moreover, these same equitable and policy considerations compel invalidation of a patent even if the misrepresented or omitted facts are not material, if they are made with the intent to mislead.

III. Constructive Abandonment and Laches.

Defendant further contends that Monsanto's patent is invalid because 3,4-DCPA was in public use and patented as a herbicide in a foreign country more than one year before Monsanto applied for its patent. This contention is based on the following statutory language:

> "A person shall be entitled to a patent unless . . . (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." (35 U. S. C. § 102(b)).

The theory of this section is that an inventor "constructively abandons" his right to a patent if his invention has been in public use more than one year before his patent application. See 2 *Delter's Walker on Patents*, § 136.

Monsanto filed its application for a patent on 3,4-DCPA on February 3, 1967. This application was stated to be a division of its application filed May 8, 1961 which in turn was a continuation of its application filed May 27, 1957 which was abandoned (DX-1, p. 1). 3,4-DCPA had been on the market more than one year before February 3, 1967 (Finding of Fact No. 30). In addition, Rohm and Haas had secured a foreign patent on 3,4-DCPA as a selective, post-emergence herbicide in May, 1959 (Finding of Fact

No. 29). This was more than one year before Monsanto's application of May 8, 1961. Hence, the issue we must decide is whether Monsanto is entitled to claim the May 27, 1957 filing date of its first application under section 102(b) for the purposes of determining the one-year statutory period. If we conclude that it is entitled to the May 27, 1957 filing date, its patent cannot be invalidated under section 102(b) If, however, we conclude that either February 3, 1967 or May 8, 1961 is the filing date, Monsanto's patent is invalid.

We have concluded that Monsanto is entitled to the May 27, 1957 filing date and therefore its patent is not invalid under the public use provision of section 102(b). Under 35 U. S. C. § 120 an inventor is entitled to the filing date of an earlier patent application if: (1) the invention patented is disclosed in the earlier application in the manner provided in the first paragraph of 35 U. S. C. § 112; (2) the inventor is the same; (3) the application is filed "before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application"; and (4) if the application contains a specific reference to the earlier filed application. See *Technicon Instruments Corp.* v. *Coleman Instrument Corp.*, 385 F. 2d 391 (7th Cir. 1967). Monsanto has met these four requirements.

First, Monsanto's 1957 application describes the invention patented in a manner which complies with 35 U. S. C. § 112. Section 112 requires "a written description of the invention, and the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor for carrying out his invention." By our

examination of the 1957 application (DX-3), we have concluded that 3,4-DCPA is disclosed in compliance with section 112.

Secondly, Dr. Huffman is named as the sole inventor in all three of Monsanto's applications.

Thirdly, Monsanto's 1967 application was filed before the "patenting or termination of proceedings on its first application or on an application similarly entitled to the benefit of the filing date of the first application." Although Monsanto's first application was abandoned before its 1967 application, there was no "patenting or termination of proceedings" on its 1961 application which, we find, would also be entitled to the filing date of its 1957 application.

Lastly, Monsanto's 1967 application contains a specific reference to each of its two previous applications (DX-1, p. 1).

Hence, we have concluded that Monsanto is entitled to the May 27, 1957 filing date for the purpose of determining whether it "constructively abandoned" any right it may have had to patent 3,4-DCPA.

Notwithstanding our above conclusion, Rohm and Haas urges that even if Monsanto did not abandon any right it had to patent 3,4-DCPA, it is guilty of such inexcusable delay in asserting that right that its patent is invalid for laches. Rohm and Haas argues that the twelve year delay from 1955, when Monsanto alleges Huffman invented 3,4-DCPA,[15] to 1967, when Monsanto filed its patent application, precludes the issuance of a patent to Monsanto where 3,4-DCPA had been in public use since 1961 and where no reasonable excuse is offered by Monsanto to explain such delay. The theory of the requirement of prompt asser-

15. See plaintiff's Proposed Findings of Fact and Conclusions of Law, pp. 8-10. Huffman stated that he invented propanil in 1954. (Huffman, N. T. 56-57).

tion of a right to a patent is that such inaction unduly postpones the time when the public would be entitled to the free use of the invention and thus defeats the policy of the patent law. See 2 *Deller's Walker on Patents*, § 135. In applying this theory to this case, we find Monsanto guilty of laches in asserting any right it had to a patent on the compound 3,4-DCPA.

Both Monsanto and its competitor Rohm and Haas have marketed 3,4-DCPA as a herbicide since about 1961 and both have attempted to secure patents for the use of 3,4-DCPA as a herbicide. Monsanto has offered no reasonable excuse for its failure to assert a claim to 3,4-DCPA during the 6 years prior to public use and during the 6 years of public use and the Court upon examination of the entire record in this case can find none. Apparently, the reason Monsanto did not attempt to patent 3,4-DCPA in 1955 was because it did not think it was entitled to a patent due to prior art disclosures (see Huffman, N. T. 181). Instead, Monsanto acquiesced in the use of the chemical compound 3,4-DCPA by the public and in the marketing of it by its competitor, content that it would receive a patent on the use of 3,4-DCPA as a herbicide. Monsanto merely stood by with an invention it now claims to have made in 1955 while its competitor marketed the "invention" commencing in 1961. The policy of the patent law requires an inventor to patent his invention as soon as expeditiously possible and cannot countenance an unexcused delay of 12 years from the time the invention is allegedly made. Only in 1967 did Monsanto, seeking a new avenue of attack in this battle of corporate gaints, decide to attempt to patent the compound itself.[16] Its move on this corporate chessboard

16. Monsanto did attempt in 1964 to claim the compound 3,4-DCPA in connection with an amendment to its 1961 application. The Patent Office denied Monsanto the opportunity to make additional claims. (See Finding of Fact No. 33). It should be noted, however, that it delayed three more years after this rejection until filing an application to patent 3,4-DCPA.

has come too late. A 12 year delay in asserting a right to patent an invention is an unreasonable delay where the inventor acquiesces in public use and marketing of his invention for 6 of the 12 years and where there is no reasonable excuse for this delay. See *Woofter* v. *Carlson*, 367 F. 2d 436, 442-443 (C. C. P. A. 1967) *citing* Judge Learned Hand in *Metallizing Engineering Co.* v. *Kenyon Bearing & Auto Parts Co.*, 153 F. 2d 516 (2d Cir. 1946); *Jones* v. *Freed-Eiseman Radio Corp.*, 47 F. 2d 174 (2d Cir. 1931); *Veaux* v. *Southern Oregon Sales, Inc.*, 33 F. Supp. 605 (D. Ore. 1940) and cases cited at page 607, footnote 3, *aff'd*, 123 F. 2d 455 (9th Cir. 1941).

IV. Anticipation.

Rohm and Haas further argues that the invention here patented was "described in printed publications" within the meaning of 35 U. S. C. §§ 102(a) and (b) and therefore was "anticipated". Under these sections if an invention was "described in a printed publication . . . before the invention thereof by the applicant for patent" (section 102(a)) or was "described in a printed publication . . . more than one year prior to the date of the application for patent" (section 102(a)), any patent on that invention is invalid. Since we have decided that Monsanto's 1967 patent application is entitled to the May 27, 1957 filing date, and since Dr. Huffman, if he invented 3,4-DCPA, did not invent it before May, 1955, the issue under sections 102(a) and (b) is whether this invention was described in printed publications sometime before May 27, 1956.

We have decided that the chemical compound 3,4-DCPA was described in printed publications before May 27, 1956 within the meaning of sections 102(a) and (b) and therefore was anticipated. It is clear that a *specific* description of a chemical compound or of its formula in the prior art is an anticipation of any claim to that compound even if the prior reference contains no method at all for its production.

See *Application of Baranauckas,* 228 F. 2d 413 (1955) and cases cited in that opinion at page 415. Rohm and Haas concedes in argument that neither 3,4-DCPA nor its structural formula was specifically described in prior printed publications. Rather, it argues that the disclosure of analogs, isomers, and homologs of 3,4-DCPA in the prior art constitutes and *implicit* description of 3,4-DCPA and that such implicit description invalidates a compound patent. The prior art in this case does in fact implicitly describe propanil and its structural formula to one skilled in the art (Finding of Fact No. 41). In our opinion this implicit description of 3,4-DCPA by the prior art is sufficiently clear and distinct (Findings of Fact Nos. 43, 44 and 45) to invalidate Monsanto's patent. Our case is on all fours with the case of *application of Baranauckas, supra.* The Court said in that case at page 416:

> "We cannot see a logical distinction between this case, where the compound was revealed as clearly as if it had been explicitly named, and those cases in which it happened to be named explicitly. In this case it would not have changed the force or meaning of the reference in the slightest if it had specifically named each of the corresponding chlorine compounds. We can see no reason why we should hold an explicit naming of a compound to be an anticipation, and hold an equally clear, though implicit, disclosure not to be an anticipation.
>
> At the same time, however, though our decision is compelled by the existing law, we feel constrained to point out that there are limits to the doctrine of those cases. What the precise boundary lines are, we are unable now to discern. Certainly they do not extend so far as to permit publication of theoretical lists of hundreds or thousands of possible compounds to deny patent protection on such compounds to those who actually discovered them later. The exact boundaries will have to be delineated on a case by case basis. But whatever they may be, we have not reached them here."

We are in full accord with the above-quoted language. To the same effect, see *Application of Petering*, 301 F. 2d 676, 681-82 (CCPA 162), *Application of Preda*, 401 F. 2d 825 (C. C. P. A. 1968).

V. Specification.

Under 35 U. S. C. § 111, a patent applicant must include in his application a "specification" and in 35 U. S. C. § 112 the matters which must be included in such specification are spelled out. Rohm and Haas argues that Monsanto's patent is invalid because it has failed to comply with section 112.

We find this argument to be without merit. Rohm and Haas can point to nothing in Monsanto's patent application to support its contention. It attempts to support it by an argument more properly addressed to the issues of Constructive Abandonment and Laches, *supra*.

Upon our examination of the patent application (DX-1), Monsanto has met the requirements of section 112.

VI. Presumption of Validity.

Monsanto has urged upon this Court throughout this litigation the rebuttable statutory presumption that a patent once issued is valid and that the burden of proving its invalidity is on the party asserting it. 35 U. S. C. § 282. We believe, however, that the presumption of validity has been destroyed in this case by Monsanto's intentionally withholding material facts from the patent office. The presumption of validity is based on the expertise of the patent office. Where the patent office does not have all material facts before it, the theory of the presumption is destroyed. The presumption falls with it. This is the rule applied in the case of intentional misrepresentations of material fact and the same should apply to intentionally withholding material facts. See *Corning Glass Works* v. *Anchor Hocking Glass Corp., supra.*

We might add that even if the presumption of validity had remained intact in this case, the result we reach would not be affected. Upon our examination of the record, we have concluded that Rohm and Haas has met its burden of proving invalidity by clear and convincing proof.

Conclusions of Law.

1. The Court has jurisdiction over the subject matter and parties of this action.

2. The patent in suit, United States Letters Patent No. 3,382,280 issued May 7, 1968, entitled "3' 4'-dicholoro-propionanilide" is invalid and unenforceable for the following reasons:

(a) The chemical compound 3,4-DCPA was obvious within the meaning of 35 U. S. C. § 102;

(b) Monsanto intentionally withheld material facts in order to mislead the patent office, thereby making its application for a patent taken as a whole misleading;

(c) Even if the facts withheld from the patent office were not material, Monsanto has come into court with unclean hands;

(d) Although Monsanto did not constructively abandon its patent application, it was guilty of laches in asserting any right it had to patent 3,4-DCPA as a compound;

(e) The chemical compound 3,4-DCPA was "described in printed publications" within the meaning of 35 U. S. C. § 102(a) and (b) and therefore was anticipated.

3. Accordingly, Rohm and Haas is not guilty of patent infringement and its counterclaim for a declaratory judgment of invalidity, unenforceability and non-infringement of the patent is granted.

4. Monsanto complied with 35 U. S. C. § 112.

5. The presumption of validity was destroyed by Monsanto's intentional withholding of material facts from the patent office.

6. Even if the presumption of validity were not destroyed, Rohm and Haas has met its burden of proving invalidity by clear and convincing proof.

ORDER.

And now, this 17th day of February 1970, it is ordered upon the foregoing Findings of Fact, Opinion and Conclusions of Law that judgment be and the same is hereby entered for defendant, Rohm and Haas Company, and against plaintiff, Monsanto Company, in Civil Action No. 68-1269.

Selected Portions of the Colloquy During the Post Trial Motions Before the United States District Court for the Eastern District of Pennsylvania on April 14, 1970 (R. 728-751).

UNITED STATES DISTRICT COURT,
E. D. Pennsylvania.

MONSANTO COMPANY

vs.

ROHM AND HAAS COMPANY.

Civ. A. No. 68-1269.
(Argued April 14, 1970)

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Mr. Leydig: * * *

The second aspect of our motion is under Rule 59 and is opposed in the alternative. We ask that the Court either insert additional findings or delete the last paragraph of No. 37. Now, that is the only finding, the last paragraph, which says there was a deliberate intent to defraud or deceive.

The Court: All right.

14. Mr. Leydig: All right, so we are asking that you get that out of there, Your Honor, and consistent with the evidence and the standard and the burden of proof, and that you insert additional findings or that you give us a new trial on that issue.

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Now, I might say a further introductory comment that there are several aspects in this case and the decision, which is unusual, and we believe underscores why the Court should give careful consideration to our motion.

First of all, with the exception of the last paragraph of Finding 37 and the last sentence, of course, of Finding 41, which, as I said before, is a clear statement of what we understand to be your position on 102 that the analogs, homologs, and isomers implicitly disclose 3,4-DCPA and the errors in 43 through 45, which we have already touched on. We believe the rest of your findings is essentially what we wanted you to find, on which we believe the law rather clearly supports us.

The Court: I frankly think that the question of interest to the Court of Appeals is going to be the question of patentability of homologs, isomers, and analogs of known chemical formulae. That is where I think you are going to really do battle.

* * *

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But now to get into this question of misrepresentation. First and foremost we did have a set of issues in which the very specific issues were spelled out on this question of whether or not there was misrepresentation or withholding of a material fact or material facts which would render the patent unenforceable and invalid.

The Court: Right.

Mr. Leydig: Now the issue, as stated in your opinion, is a different issue.

The Court: I don't see that is a different issue at all. The question was whether there was a deliberate withholding of a material fact, and I found that there was.

Mr. Leydig: Well, all right, Your Honor, you read it that way; but certainly I did not necessarily do so nor should one do so.

17 The Court: Well, it wouldn't be really material if it were couched any other way.

Mr. Leydig: Well, you certainly could have withheld

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a material fact but not done it intentionally or for the purpose of misleading.

The Court: If that had been the finding, the probability would be that the decision would go the other way on that point. The withholding only becomes significant if, number one, it is material and, number two, was deliberate, as I understand it.

Mr. Leydig: But the point is, Your Honor, that the issue didn't provide for that. It had no specific intent involved in the thing, and that issue was worked out between counsel and approved by Your Honor. You said this is the issue we are going to go to bat on. I am saying that that isn't the issue that we understood to be tried here.

The Court: Well, let's look at the pretrial order. "Did Monsanto misrepresent or withhold"—quoting from Page 11 of the pretrial order—"withhold material facts during the prosecution of the patent in suit so as to render the patent invalid and unenforceable?"

I said in substance yes, they did, the facts were material, the withholding was deliberate and it, therefore, rendered the patent invalid. I don't know how you could frame the issue any clearer.

18 Mr. Leydig: The point is, Your Honor, there can be misrepresentations—you decided it. I have no question you decided it in terms of deliberate attempt to deceive. I say that was not the issue before us.

The Court: That fact really stems from the testimony of your own witness.

Mr. Leydig: Which one, Your Honor, Mr. Cole?

The Court: Yes, Mr. Cole.

Mr. Leydig: What in the world did he say that gave you that impression? To the contrary—

The Court: That he had this information available and that he decided not to include it.

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Mr. Leydig: There is no question it wasn't accidentally left out.

The Court: He didn't think it was material, but I have differed with him on that. I don't see how anybody could reasonably conclude that it wasn't material.

Mr. Leydig: May I speak to that? I am not discussing the question whether it is material or not. I don't think it is, and I said so to you, the point whether it is material or not. The question is you said with intention and his employer with intention left that out to deceive.

The Court: Right.

19 Mr. Leydig: All I am saying to you is that is a very serious charge to hold anyone guilty of.

The Court: The word "misrepresent" normally implies a deliberate misrepresentation and withholding of material facts and also normally implies a deliberate withholding.

I really think that you are trying to make an issue out of something that is not an issue. You were well apprised of the fact that this was an issue that was going to be tried. It was tried. You adduced evidence, first of all, to the effect that the matter that was withheld was not material, with which I disagree, and that, therefore, there was no intentional misleading of the Patent Office. I found

those facts against you. If the Court of Appeals wants to differ, they can differ.

Mr. Leydig: Sure, I understand that; but let's at least keep this in mind because I think it is important: You have held the plaintiff here guilty of deliberate misrepresentation with intent to deceive and that the Patent Office was deceived. That is fraud. You have said so. You have called it that at one point in your opinion.

Now, the burden—you called it "unclean hands." The burden on anyone proving any one of these things is very great.

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I say, Your Honor, number one, we didn't believe that was the issue before us. But whether it was—

The Court: What other issue could you try if you are going to try whether you misrepresented to the Patent Office? I don't understand that.

Mr. Leydig: Let me explain it, if I can.

If your Honor found that those facts in your opinion clearly should have been before the Patent Office, there still is the clear question of whether they were left out for the purpose of deceiving. A man can in good faith decide—

The Court: Sure, but I have found otherwise. You argued that in the case. The issue was tried before me, and I have resolved it against you on the evidence.

Mr. Leydig: But you did not resolve the issue.

The Court: I don't know what more I can do.

Mr. Leydig: I am only saying you did not resolve the issue before you in the first place against us. You resolved a different issue.

I am saying that issue, as you have decided it, requires a very strong burden.

The Court: What I did was insert the word "deliberately" before misrepresent as the issue is framed. I found Monsanto deliberately misrepresented and withheld material facts during the prosecution of the patent. If
21 there wouldn't be the withholding and misrepresentation, it wouldn't be material if it weren't for the purpose of affecting the Patent Office in the granting of this patent.

Mr. Leydig: Your Honor, O.K., I understand that.

You also said they did this deliberately to mislead, and you have said ultimately that they were misled.

You also said, Your Honor will recall, it doesn't make any difference if it was material or not.

The Court: That is dicta.

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Mr. Leydig: Let me go on here.

I think the point is that I certainly understand you have reached this in good conscience, and I understand you feel the way you do. I think it is important that this company and this individual are going to be held to have done something reprehensible in what they have done; we will be sure to have our day in court. That is all I am asking for.

The Court: You know, I think part of this problem, frankly, Mr. Leydig, might arise from the practices of the patent bar in the pursuit of patents—

Mr. Leydig: Well, Your Honor, how familiar are you with that?

The Court: —as evidenced from this case.

22 Now if a lawyer who was dealing with any governmental agency—I will use as an example the SEC because that is where the issue comes up often enough—no lawyer in his right mind in pursuit of a registration state-

ment or a prospectus would not have included that because you resolve the issues in favor of disclosure.

Now, I think that ought to be spelled out as a standard of conduct with the Patent Office. Some of the cases use very general language. I have spelled it out. If the Court of Appeals disagrees with me, they can disagree on this, too.

Mr. Leydig: So isn't Your Honor—let me get on here. We have analyzed your opinion and tried to decide what it was that brought you to that conclusion, and I submit these are the factors. I would like you to bear with me, if you will.

First of all, you concluded there was necessarily a very high standard of conduct, no disagreement. I don't agree necessarily that it is the same as the SEC because I don't know what it is. It was not something that we had in the first instance, so I certainly take issue with that as a mat-

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ter of principle. But a very high standard of candor is required, no doubt about it.

The next point is that you took the position that the case of In Re Henze was the controlling decision and that when the Patent Office rejected the claim to 3,4-DCPA in 1967 on 2,4-DCPA and 3,4-DCAA that if the obviousness rejection under 103 was to be overcome that case had to be—

The Court: Avoided.

Mr. Leydig: That had to be reckoned with. So if that had to be reckoned with, I think you next said to yourself, as you read Henze, the claimed compound cannot possess any property that the prior art compound possessed; is that correct?

The Court: I think that is what Henze says.

Mr. Leydig: All right, I take it this is what your position was; and you then said in order to overcome the 103 rejection in the face of Henze Monsanto hid the fact—

The Court: That DCAA had herbicidal qualities at certain rates of application.

Mr. Leydig: All right.

The Court: You have followed the opinion exactly as I have articulated it, and you can disagree with that.

Mr. Leydig: It doesn't get us to where you ended up, if I may submit that.

24 So the point is they tried to hide something and then finally—

The Court: Therefore at this point in your own argument what they are trying to hide is material, right?

Mr. Leydig: I am not saying it is or it isn't. I am saying that what you said—

The Court: If you agree with what I have said so far, there is no doubt.

Mr. Leydig: I agree that is what your opinion was based on; that is all. I am not reciting, Your Honor—

The Court: All right.

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Mr. Leydig: I am listing what we understand you have gone through in arriving at this decision.

The Court: All right.

Mr. Leydig: So as we have said in the papers filed in connection with this motion, we believe that the Court erred in its conclusion; that is, the patent was invalid under 103. But we have no intention of arguing that point here today.

The Court: Right.

Mr. Leydig: It is necessary, however, in order to discuss the evidence before this Court and its holding of in-

tentional deceit, to be sure that in fact these were the bases for the Court's findings; and if they were, to ask this Court to reconsider carefully the question of whether in 1967 when the Husted affidavit was filed and, indeed, when the third application itself was filed in that same year that it was not only possible but indeed likely that an attorney representing Monsanto before the Patent Office could reasonably and in good faith have approached the response to the Patent Office on the 103 rejection on 3,4-DCAA and 2,4-DCPA on either of the following bases, which would, we submit, in no sense involve intention to deceive. In other words, this intention to deceive is a different horse altogether.

I am saying here is a completely different way to look at this thing, which has never even been discussed with you. First of all, there is a possibility, Your Honor, and it is a very strong possibility, that the 1951 Henze decision, which is a decision which was written two years before Section 103 even went on the statute books and which preceded scores of cases in this same field which Your Honor has said in his opinion can't be reconciled so far as you can see with Henze, that that case is really not the controlling case. It may be part of this; but why that case should be singled out and on the basis of a 1951 case a 1967 act should be said to be intentional and delib-

erate fraud on the Patent Office I submit, Your Honor, there is no reasonable basis for saying that is necessarily so.

The Court: Look, if this were a criminal case, Mr. Leydig, it is very possible as to the intention to deceive a jury might have reasonable doubt under all of the evidence in the case.

But it is not a criminal case. It is a civil case. The burden is the preponderance of the evidence, and I have found that it is more probable than not.

Mr. Leydig: It is more than that, Your Honor.

The Court: That is all it is.

Mr. Leydig: Oh, absolutely not, Your Honor. Unclean hands and fraud must be held by a clear certainty. There is no question about that, Your Honor.

There may be a question of how you say it, but it sure isn't a mere preponderance. It is a heavy burden. That is what we are trying to say all along here. It is a different problem entirely, and this defendant has not met that burden.

Mr. Connolly: Your Honor, the record here permits no inference but deliberate withholding. It was tried on that basis. It shows that time after time the tests that showed that these related compounds had significant herbicidal activity were withheld and they were deliberately withheld. The one who did it said so. He withheld it because they showed what he didn't want to show.

27 The Court: He didn't actually say that. He said he didn't include them because he didn't think they were material. I don't frankly buy that.

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The Court: Go ahead, Mr. Leydig.

28 Mr. Connolly: There is no other inference possible, Your Honor.

Mr. Leydig: Well, Your Honor, I submit there is; and that is what I am simply saying here.

The Court: I am afraid, Mr. Leydig, you are going to have to argue that to the Court of Appeals. I have made the finding. I think this morning—

Mr. Leydig: But I think it is important, Your Honor, that you hear me out, if you will.

The Court: I will hear you out.

Mr. Leydig: I want to get this point across. I am saying to you the first possibility the Henze decision was not the controlling decision or if, at least, it was in any way controlling it was not alone. For example, in 1964 the DeLarjarta case, the 1966 Gold-und-Silber case, the 1966 Lunsford case said flatly in a situation like this where you have discovered that your compound has certain properties that the prior art hasn't any concept of you don't even have to put data in.

So that it wasn't any data that had to be put in. Now that is Point No. 1.

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The Court: Well, I think those cases are wrong, if that is what they hold.

Mr. Leydig: Your Honor, they are not wrong. They are the later cases. Your Honor, you can't disregard
29 the decisions. They are after another. They are out of the same court that the Henze decision came out of. How can you disregard them?

Mr. Connolly: The Gold-und-Silber case specifically referred to Henze, and it has—

The Court: Mr. Leydig, finish your argument on this point.

Mr. Leydig: I wish I could get through this and make these points. I think there are points that haven't been made and you should have them.

The Gold-und-Silber case, Your Honor, has just been decided at the district court level within a year before this affidavit was filed. It says as flatly as any—

The Court: But, you know, it seems to me the answer to that, Mr. Leydig is this: What you are saying is Mr. Cole may have had legal reasons to believe that he didn't have any obligation to submit affidavits with respect to tests on homologs and analogs disclosed in the prior art.

That may well be true, but he elected to submit the Husted affidavit.

In that affidavit he elected to describe some of the tests, and he also elected not to describe the tests which bore unfavorably on 3,4-DCPA.

Mr. Leydig: Your Honor, but they don't. They
30 don't, and they are on that—

The Court: That is another issue.

Mr. Leydig: It is very much a part of this question, Your Honor. In other words, you are saying what he left out was hiding something that he didn't want—

The Court: That is right. You say it is not material, which is a separate point, isn't it?

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Mr. Leydig: Your Honor, if it were in there, I am saying it wouldn't make any difference. Of course, I am saying that. If you are going to blame a man for doing something deliberately, hiding something because he didn't want to have some ill effect, if the stuff he was trying to hide (a) wasn't hid, which is the first point, and, secondly, even if it had been it doesn't make any difference, that has got to go to the question of whether he was doing something deliberate, wrong, on the public.

The Court: Well, we start out—the normal test of even mens rea in a criminal case is, first of all, the consciously doing of an act volitionally.

So you start out with here somebody elected not to include these results. The next question is: Were they material?

Mr. Leydig: No question about it.

The Court: Were they material?

31 Mr. Leydig: I think that is the next question. Your Honor said he didn't think it was necessarily important.

The Court: I said that is dicta. The next question in analyzing the motivation of the omission is whether the materials omitted was pertinent, relevant, et cetera, because then if you conclude it is then the volitional act in omitting it becomes an intentional—

Mr. Leydig: But I submit it isn't necessarily scienter. In other words, if you look at the situation and you conclude that you don't have to do that that doesn't necessarily mean you are trying to defraud somebody.

Let me go on, Your Honor and I will finish up here if I can. Now even if the 1951 Henze case was still controlling in 1967 and you disregarded all of the subsequent cases, which I do not see how possibly they can be disregarded because they are out of the same court and the same general area, the data in the affidavit which was

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submitted showed clearly that 3,4-DCPA possessed not only one but several unexpected, unpredictable properties which were not in fact possessed by 3,4-DCAA or any other related compounds.

In other words, it satisfied him, sir. If you want to take it on Henze, the data was there. So you couldn't have been trying to hide something to get around Henze, and I will tick those off in a moment.

32 For example, the 3,4-DCPA killed cocklebur and killed crabgrass, and none of the other compounds showed the slightest phytotoxicity to such plants. That is one point. It did and nothing else touched it. 3,4-DCPA selectively killed crabgrass and it selectively killed barnyard grass but did not affect rice or wheat.

Here is a clear showing of something that 3,4-DCAA did not do. So it did in fact possess properties not possessed by the prior art compound.

Going on, having in mind that what was involved here were herbicides—that is, something that kills a plant or plants—and that a compound that doesn't kill it but simply has slight phytotoxicity and comes back or moderate phytotoxicity and comes back—and remember the scale zero through four set up by chemists give them maximum output from a minimum of information. They want to know did it have any effect, little effect, or did it kill it. We are talking herbicides.

The point is if it doesn't kill it it is no herbicide at all. It is not only not a herbicide but it has no agronomic value that we know of.

On the basis of even eliminating a 3 rating or maybe two 3 ratings in that table in the Husted affidavit from consideration and eliminating radish, which I think
33 it should be clear on this record the "2" was transposed and became a "4," that was a typographical error which is shown in there, 3,4—

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The Court: I find in the footnote that particular omission.

Mr. Leydig: I think so. 3,4-DCPA killed six plants on which neither 3,4-DCAA or any other compound in the group had any significant effect much less killed them.

Now, here are three different things possessed by the claimed compound of a very vital nature right in the field we are talking about where there was no suggestion in the prior art. So the data had it.

The point of this exercise, of course, is to show that far from necessarily giving rise to the inference that what was done was done with evil intent, there is, we submit, rightly an inference that what was done was done in complete good faith in accordance with what we reply is the applicable standard of candor and case log.

Let us also remember two rather important things dealing with this question of bad intent. First, Monsanto had cited against the prior art showing 3,4-DCAA and 2,4-DCPA—

The Court: All right, and it showed tests.

Mr. Leydig: Let me finish.

34 The Court: DCAA had significant herbicidal value.

Mr. Leydig: It isn't very significant. I will show you in a minute. Let me come back to that.

It had two compounds cited against the 3,4-DCAA and 2,4-DCPA. Out of an abundance of candor and good faith it voluntarily cited all additional related prior art compounds that it knew of.

Now, it went the full route. It then went on to show that 3,4-DCPA was remarkably unpredictably better than any of the prior art compounds and, indeed, even an additional group of compounds that were closely related that weren't in the prior art in order to show the Patent Office what the situation was.

Now, in addition when that affidavit was prepared Mr. Cole took that affidavit to the examiner and showed

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it to her to give her an opportunity to ask questions about it. Now this is not a usual thing.

They also went down to that examiner and they said: "Do you know that Rohm & Haas made the same claim but the Patent Office didn't give it to them? You should know that when you are considering the question of whether to allow this patent."

In other words, there is an attorney in a company that went the full route. They did things that are

35 normally not done in terms of the last mile of candor and disclosure, and yet they are held to have done something improper.

I submit, Your Honor, that even if—after all this there is still some feeling that they should have put the data in and they didn't—I submit that you should at least consider the question whether there is not the reasonable possibility that what was done here was done in good faith. If you do come to that conclusion, there should be no unclean hands or fraud holding.

I submit that under the law—

The Court: All right, I get your point.

* * *

Mr. Leydig: Thank you.

This Court has relied on in re Henze in connection with both its holding of obviousness and holding of decit. There is no doubt that situation relates to the fact situation somewhat like this case. It is therefore understandable why the Court directed its attention to it.

It is not understandable why the Court did not take into consideration the facts there and here; and, even more importantly, why it chose to rely on that case which was decided before 103 of Title 35 went on the books
36 and discarded the later cases which construed Henze

in the light of the factual situations much like this case.

The Court: In this, Mr. Leydig, I think frankly Henze and the gloss that I have put on Henze makes sense here. I don't think it makes any sense to give you a compound patent on a structurally obvious, easily compounded compound, permitting you to have a monopoly over everybody else in the field when what is the essence of the invention is the new use you find for the compound.

I am perfectly happy for the Court of Appeals to consider that position. If they reject it, fine. That is what I think the law ought to be.

Mr. Leydig: All right, Your Honor, it clearly is not the law.

The Court: I think it is what the law is and should be.

Mr. Leydig: Despite the cases to the contrary?

The Court: Despite the fact that there are cases I don't think are reconcilable. That is all.

Mr. Leydig: Your Honor, I understand how strongly you feel about it. I have no desire to get into a big hassle about it.

Remember the case we cited to you in re McLemore? That is their case. It is where they had gotten already
37 claims to the method of using a particular chemical to lower blood pressure, and they had gotten a claim to a tablet.

The Court: Yes.

Mr. Leydig: They were trying to get the claim to the compound. The Patent Office took the position that you have so well expressed, and the Court of Customs and Patent Appeals flatly said that is not the law. That is a 1967—

The Court: Maybe the Court of Appeals will say that is not the law in this area. They are going to have to say it because I am not going to say it.

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Mr. Leydig: O. K., Your Honor, you have considered McLemore and you have disregarded it.

The Court: I just don't think—

Mr. Leydig: Your Honor, one other thing that I think you should consider and that is the case of Graham v. Deere. It isn't mentioned in your opinion. Graham v. Deere is a case on 103. It is a 1965 decision out of the Supreme Court of the United States saying what a Court is supposed to do when it is faced with a job of deciding whether an invention is obvious or not. It is very, very explicit.

I will find it, and I will quote it exactly. Basically you have to determine what the prior art is, determine what the invention is, and determine the state of the art and the differences.

38 The Court: Well, the invention here I have no doubt is the discovery of the selective herbicidal effect of propanil; that and nothing more. That you may be entitled to a patent on, and that you are litigating now in your interference down in Washington.

Mr. Leydig: We are simply saying to you, Your Honor, that it is clear that the law says when you discover that under these circumstances you are entitled to the compound as well.

The Court: I don't think that makes any sense. I am content to have the Court of Appeals reverse me on that and let them take the burden of saying the law is otherwise.

Mr. Leydig: All right, Your Honor, fine.

Did you consider Graham v. Deere?

The Court: Sure I considered it.

Mr. Leydig: In other words, what you did, Your Honor, you said because there are similarities between 3,4-DCPA and 3,4-DCAA in that they both are shown to kill one plant, and that is all this data shows; but DCPA, 3,4-DCPA, kills 13.

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The Court: And because they are structurally obvious from each other and because the compounding of 3,4-DCPA was nothing more than a routine commercial
39 laboratory running out a series of formulas sent in by Dr. what's-his-name, I say that under those circumstances the law ought not to be that you ought to be entitled to a 17-year monopoly on that formula.

If the Court of Appeals or the Supreme Court, if they really get involved in patent cases, disagree with that fine. On that proposition I am willing to sink.

Mr. Leydig: Two points, Your Honor, on that and I will move on. Are you aware, I am sure you are, that the last sentence of Section 103 says this—and it was put in precisely to respond to the point you have just made: "Patentability shall not be negatived by the manner in which the invention was made."

It has been held repeatedly that the routine experimental activity—

The Court: I think that may have some real bearing particularly in the mechanical patents and use patents.

Mr. Leydig: Well, all right, Your Honor. Just to have it here and to read it carefully under 103 the Supreme Court said in Graham v. Deere the scope and content of the prior art are to be determined. The differences between the prior art and the claims at issue are to be ascertained.

I submit the differences are remarkable here. There is one similarity which we have never tried to hide and which we have said we discovered and are still willing to claim in another application as Your Honor knows. Look at the differences between the prior art and the claims at issue and the level of ordinary skill in the pertinent art resolved. Your Honor had said it was not predictable. That answers it as far as I can see and as far as the cases are concerned.

The Court: All right.

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Mr. Leydig: This Deutsche Gold-und-Silber case which came out of the district court and affirmed in the Court of Appeals said: "Where the prior art does not contain the slightest suggestion that the properties of the claimed

compound would make it useful for certain advantageous purposes, then the utility itself is unobvious and it is unnecessary for an applicant to prove by comparative tests that his compound is more useful for certain purposes than the closely related prior act compounds."

I have cited DeLajarte, Lunsford, and so forth.

The Court:. I really think, Mr. Leydig, we may be doing the patent bar a service by getting a specific holding by the Court of Appeals, preferably by the Supreme Court, on the question of patentability of homologs and isomers.

41 Mr. Leydig: I agree.

The Court: It is clearly raised in this opinion.

Mr. Leydig: I am not raising any question about 103. I say you have tried that and come up with fraud. That is why we are here today.

The Court: That is a separate issue.

Mr. Leydig: That is why we are here today.

The Court: Go ahead.

Mr. Leydig: Here in this court, and convenient if Your Honor has DX-1, it would be useful to have the Husted table of data.

The Court: I don't think I have it before me.

Mr. Leydig: I have a copy before me. You can have mine.

(A document was handed to the Court by Mr. Leydig.)

Mr. Leydig: There is the table of data in the Husted affidavit.

The Court: Thank you.

Mr. Leydig: What I have done here on this chart, because it is hard to follow, all those numbers on those

pages in DX-22, whcih is the original Husted memorandum from which the data in the affidavit came, is I have
42 included all of the runs that have been left out from the .1, two pounds per acre pages, for the four compounds listed. In other words, we have left out the group in the middle.

If you will recall, there were about six others which they were almost all zeros. There were one or two one ratings.

The Court: Weren't some tests run at 8 pounds per acre?

Mr. Leydig: Not in that; there were in the application, the '61 application, which has that in there, surely. I will come to that, but these are run at .1.

Now, remembering what Your Honor has found because of Henze we hid this data. Well, what did we gain by hiding it and why in the world would we hide? The only instance in that data where there is any showing that 3,4-DCAA or any other compound killed a plant was on pigweed. Here is another pigweed run where there was a 3.

But our application, which is pending and still pending and was pending at the time and was incorporated by reference, discloses the same thing in Table 1. It showed that both of these compounds killed pigweed and they both killed smartweed, I believe was another one.

There was nothing being hidden. This was something that they had made oath to the Patent Office. We have
43 made an invention which is the use of a class of compounds including these two and many others.

So that when the time came to put these data in it is inconceivable to me, Your Honor, why anybody would say,

"You are hiding it." It is there. The point is you have to show the differences from the prior art. There is no advantage. You are not helping the examiner by showing him that in one case there is a similarity.

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The trouble is we are talking herbicides here. If you say it is a therapeutic compound because one chemical compound would cure heart disease and another one was good for athlete's foot and they happen to be similar in chemistry, surely the two of them have each made a fantastic contribution; and go on down the list.

The same thing goes here. Here is a bunch of different plants. Nobody knows what chemical will kill a given plant. Here is proof in the material left out: Soybean, lambs-quanter, smartweed, velvet leaf, coffee weed, crab grass and pigweed again are all killed. Look at what the others are. The only ones which DCAA showing anything was on pigweed. That plant is specifically there. Whether it is or is not we have never said anything but that it has some herbicidal activity. That was the whole point of the original and the second case. I am saying, Your
44 Honor, there they are. That is what they are supposed to have hidden. Why?

The Court: Under Henze if it has the same property it is not patentable.

Mr. Leydig: It had one property that we discovered. It killed pigweed. Look at the other things plus what you have in front of you, the other eleven plants. 3,4-DCAA does not have that. There is no argument between us. We can read ad nauseum from Rohm & Haas papers.

The Court. That is your argument that it is not material. If it is not material, you are right. If it is not material, my finding of deliberate deceit is wrong.

Mr. Leydig: I am saying it is material.

The Court: If it is material, then no.

Mr. Leydig: You mean just because something is generally material—

The Court: I think that the standard of disclosure is or should be that the patent application ought to state everything necessary to be stated so that the application taken as a whole is not misleading and that he ought

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not to omit to state anything, ought not to omit anything, which might make a statement in his application or other papers materially misleading; that is all.

Mr. Leydig: In what way was our application misleading? That is the point.

45 The Court: The language to the effect that DCPA had properties that were—I forget the precise language.

Mr. Connolly: Not possessed—

The Court: Not possessed by the prior art homologs, analogs and so forth.

Mr. Leydig: It doesn't—I mean, it does, Your Honor.

The Court: It has selective herbicidal effect which is not shown.

Mr. Leydig: It is shown. It has herbicidal—

The Court: Which is shown, yes, but what wasn't shown was that DCAA did have very effective herbicidal effect.

Mr. Leydig: On one plant.

The Court: On pigweed.

Mr. Leydig: Which was all we said to the Patent Office and was before the Patent Office, Your Honor.

The Court: It wasn't in the Husted affidavit.

Mr. Leydig: Well, the point is, Your Honor, you have

held that by leaving it out of the affidavit we were hiding something from the Patent Office. The information in Table 1 of the second and the first case—

Mr. Connolly: It is much more than that left out, Your Honor.

The Court: All right.

46 Mr. Leydig: There it is. That is Table 1, Your Honor. You will note that 3,4-DCAA—of course, the application says that these 3,4-type compounds have these effects.

On that table the zero, I believe, it seems to me was backward. The zero is nothing alive. In other words, complete—

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The Court: Complete kill.

Mr. Leydig: And the others are the extent of kill and stand—

The Court: On the table 3,4-dichlorisobutyranilide.

Mr. Leydig: That is a very good one, and we discovered it and are still seeking in the Patent Office to get a patent on that.

The Court: Well, all right, you are going to have the same problem with that as you had with this, I suspect, not with respect to the process of the application but with the general question of the patentability of homologs and isomers.

Go ahead.

Mr. Leydig: All right, Your Honor.

Just so I wind up on this deliberate misrepresentation part, again we remind the Court of the burden

47 of proof, which we believe is clearly on them, on the defendant, in a case of this kind which has not been upheld.

The only evidence that Your Honor has is DX-22, DX-1, which is the Husted application, and Mr. Cole's testimony. Mr. Cole certainly said that he did not put the data in. There is no doubt about that. But he also said that what he did was in accord with what his understanding of the law and of the procedure was. He has been a Patent Office examiner for years and a patent lawyer for years. You have no other evidence as to what would be right or wrong except apparently a reaction.

I submit, Your Honor, that is pretty difficult to lay on a person and a company the heavy weight of a holding of this type.

* * *

Opinion on Post Trial Motions.

UNITED STATES DISTRICT COURT,
E. D. Pennsylvania.

MONSANTO COMPANY

vs.

ROHM AND HAAS COMPANY.

CIV. A. No. 68-1269.

Opinion and Order on Post Trial Motions.
(May 21, 1970.)

On February 17, 1970, we filed our Findings of Fact, Opinion, Conclusions of Law, and Order in the above-captioned case finding for the defendant and against the plaintiff in this patent infringement action, holding that plaintiff's patent was invalid. Plantiff now moves under Rules 52 and 59 of the Federal Rules of Civil Procedure for an Amendment of our Findings, for the Addition of New Findings, and for a Partial New Trial.

Plaintiff's motion is directed at the following:

(1) Our Finding that the plaintiff was guilty of deliberately misleading the patent office in connection with the prosecution of its patent application. (Finding of Fact No. 37.) With respect to this Finding, plaintiff requests the following relief: (a) either a new trial or (b) a modification of the Finding and the addition of New Findings numbered 50-56 in the appendix to plaintiff's motion.

(2) Our Findings with regard to some of the prior art in this case (Findings of Fact Nos. 43-45). With respect to

these Findings, plaintiff requests a substitution of new Findings numbered 57-71 in the appendix to plaintiff's motion.

For the reasons set out below, plaintiff's motion is denied.

(1) Finding of Fact No. 37.

As noted above, in this Finding we found that Monsanto was guilty of deliberately misleading the patent office. Monsanto argues that it is entitled to a new trial on this issue because this was not the issue embodied in our Pre-Trial Order as an agreed-upon issue to be tried in this case. Rather, it is argued that the Court decided a different issue and that the plaintiff did not understand this to be the issue before the Court. Monsanto claims that it was thereby denied due process of law.

Plaintiff's argument must be rejected. The issue, as broadly framed in our Pre-Trial Order, reads as follows: "F. Did Monsanto misrepresent or withhold material facts during the prosecution of the patent in suit so as to render the patent invalid or unenforceable?" In our Opinion, at page 17, we stated the issue as follows: "(a) Did Monsanto deliberately misrepresent or withhold material facts in order to mislead the patent office during the prosecution of the patent in suit so as to render the patent invalid or unenforceable?" It is clear to the Court that the issue decided is within the broader issue stated in the Pre-Trial Order. Moreover, it is also clear from the record that counsel for plaintiff was aware that the issue of fraud was before the Court. For example, in his opening statement plaintiff's counsel stated at page 26 of the Notes of Trial Testimony: "We also understand the defendant will attempt to prove that Monsanto, during the prosecution of its application, in some way misled the Patent Office into believing that the compound had unique and unexpected

herbicidal properties and that it thereby rendered its patent unenforceable". And further: "So that the charge—and it is one which smacks of fraud and should not be made lightly . . . I think it will be perfectly clear before we are through here that there were no intentional misrepresentations . . ."

Under these circumstances, plaintiff's motion for a new trial on this issue is denied.

Plaintiff's motion for a modification of Finding of Fact No. 37 is premised on the argument that Rohm & Haas has failed to meet its burden of proving that Monsanto made intentionally misleading omissions of material fact in the course of prosecuting its patent application. In conjunction with this motion to modify, Monsanto asks that we make additional findings. We have decided to deny this aspect of Monsanto's motion for the following reasons.

As to whether Rohm & Haas has met its burden of proof, we have decided to let the record stand as it is. However, we are compelled to point out that even if we were persuaded to change our mind and find that although there were intentional omissions of fact, Monsanto did not intend to mislead the Patent Office, this would not lead us to a different conclusion with respect to the validity of a patent in light of such omissions. For the same policy considerations which underlie our February 17th Opinion (pages 25-28), we hold that even if Monsanto did not intend to deceive the Patent Office, the fact that it intentionally withheld facts which were material to the decision whether it was entitled to a patent is sufficient to bar the issuance of a patent to it. We found in our original Opinion that the facts withheld were material (see pages 24-25). We believe that all questions of materiality in dealings with the Patent Office ought to be resolved in favor of disclosure. Only such a standard can protect the public from the deadening competitive effect of improvidently issued

patents. In this case, a comparison of the herbicidial efficiency of 3,4-DCPA and other closely related compounds was clearly material to Monsanto's right to a patent. It is also clear that the decision not to disclose these facts to the Patent Office was a deliberate one (N. T. 791-792).[1] Under these circumstances, even if the decision not to disclose was motivated by nothing more than bad judgment as to the materiality of the information, the patent must still be rejected. We hold that a specific intent to deceive is not necessary to bar a patent when there is evidence of a deliberate withholding of material information. Of course, if it is found that the facts withheld were not even marginally material to the issues before the Patent Office, then our decision on this precise issue would be different.

In addition, we specifically disapprove of any concept which permits patent applicants to "put their best foot forward" before the Patent Office (see Monsanto v. Dawson Chemical Co., Civil Action No. 68-H-400, filed April 17, 1970, Southern District of Texas at page 29). This kind of concept is only workable in adversary proceedings where the other side can be relied upon to bring out all of the facts adverse to the granting of the patent. In view of the realities of the patent office backlog, a standard of disclosure appropriate to adversary proceedings would defeat the public interest in not having patents improvidently issued.

(2) Findings 43-45.

In our February 17th Findings of Fact, we concluded that the prior art in this case does not *specifically* recite the name 3,4-DCPA nor its formula, but that by virtue of the specific disclosure in the prior art of certain homologs, isomers and analogs of 3,4-DCPA that 3,4-DCPA and its

1. See also the transcript of the oral argument before us on this motion at page 18 where plaintiff's counsel concedes that the failure to disclose was not accidental.

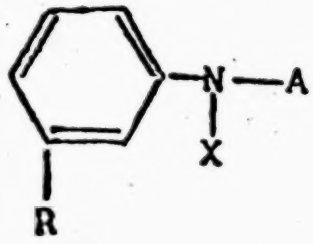
formula was *implicitly* described to one skilled in the art. Plaintiff now asserts that certain portions of Findings 43-45 are (1) inconsistent with the above proposition and (2) completely in error in certain important respects, and moves that new findings, numbered 57-71 in the appendix to its motion, be substituted therefor. We have also decided to deny this aspect of plaintiff's motion.

Findings 43-45, with the particular excerpts challenged by this motion underlined, are as follows:

43. Biernert specifies that the acylamino group can be either acetylamino or propioylamino (DX-68, p. 1, col. 2, lines 1-12). *The small number of so-described 3,4-dichlorobenzenes include 3,4-DCPA and 3,4-DCAA. The procedure taught in this patent to make the described pigments can start with either 3,4-DCAA as shown by FIAT* Final Report No. 1313, dated February 1, 1948 (DX-69), *or with 3,4-DCPA, the next higher homolog of 3,4-DCAA, to produce phthalocyanine pigments having "extremely close" properties* (Price, N. T. 522-33; Urry, N. T. 901-02). 3,4-DCPA was used by Dr. Price in the reaction disclosed by FIAT and a pigment was obtained having properties "very similar" to those of the pigment made from 3,4-DCAA. (Price, N. T. 534-39).

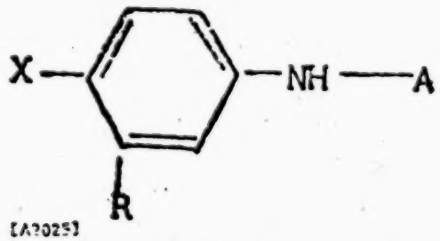
44. Chattaway, J. Chem. Soc. Trans. 81 (1902), pages 637-644, (DX-71), describes the migration of a chlorine atom from the nitrogen to the para and then the ortho positions in propionanilide and chlorinated propionanilides, *including that derived from 3-chloroaniline wherein the meter position is already substituted by chlorine* (page 637). *The products obtainable by Chattaway's method constitute a small group of ten chloropropionanilides, one of which is 3,4-DCPA obtained from 3-chloroaniline.* (Price, N. T. 548-49, 552). The reaction that Chattaway gives is very similar to the one that can be applied to the production of propanil. (Urry, N. T. 904-05).

45. Fontein, Recuil Des Travaus Chimiques Des Pays Bas 47 (1928), pages 635-667, (DX-70), describes the reaction velocity measurement of intra-molecular changes in a group of compounds having the formula:



[A2026]

wherein X is chlorine or bromine, A is formyl, acetyl, propionyl, butyrl or benzoyl, and R is hydrogen, chloro, bromo or methyl (page 638). The changes under study are migration of X from the nitrogen atom (N) to the 4-or para-position on the phenyl nucleus thereby producing compounds having the formula:



[A2025]

wherein X, R and A are defined as above (pages 644, 654, 657, 663). *Fontein indicated a preference for compounds of this second formula wherein X is chlorine and included specific reference to the production of 3,4-DCAA (page 663.) (Price, N. T. 560; Urry, N. T. 905). Using propionyl in lieu of acetyl 3,4-DCPA will be obtained (Price, N. T. 566-61; Urry, N. T. 906-07)*

We do not believe that the challenged findings are inconsistent with the proposition that 3,4-DCPA was implicitly but not specifically disclosed in the prior art. These findings include statements of (1) what the prior art says

specifically and (2) what the prior art says implicitly to one skilled in the art. The challenged excerpts are, for the most part, findings as to what one skilled in the art would be taught by the prior art, as testified to by defendant's experts, and should not be misconstrued to be statements of what the prior art specifically says. This should be very clear when the Findings are read in conjunction with the record citations.

Lastly, we do not think that the challenged excerpts are in error. We have again reviewed the record with respect to these Findings and find that the record supports them.

Thus, except to the extent that we amended, these Findings at the oral argument on this motion, we will let our findings stand as they are.[2] Accordingly, plaintiff's motion for substitution of new findings, numbered 57-71 in the appendix, is denied.

(3) Finding of Fact No. 49.

At the oral argument on the post-trial motion in this case, counsel for defendant suggested that since the Court had expressed a desire to avoid prejudging any issues still pending before the Patent Office we amend Finding of Fact No. 49 because it may have such an effect. Counsel for the plaintiff argues it will not have a prejudging effect and, in any event, defendant's request is an untimely attempt to seek an amendment of our Findings.

Quite apart from whether this Finding prejudges issues pending before the Patent Office, we have decided, on our own accord, to amend Finding of Fact No. 49. The amendment is necessary because upon reexamination of the rec-

2. At the oral argument, we amended the second sentence of Finding of Fact No. 43 as follows:

"The small numbered so-described 3,4-dichlorobenzenes *would, to a chemist skilled in the art,* include 3-4-DCPA and 3,4-DCAA *although the specific formulae were not recited by Biesert.*

ord, we find that the Patent Office has cited one prior art reference before us as teaching that some compounds related to 3,4-DCPA have phytotoxic properties (see DX-3, p. 45 citing the CBCC publication, DX-74). In light of this, we prefer to limit our Finding to the selective, post-emergence herbicidal use of 3,4-DCAA and 3,4-DCPA. Accordingly, Finding of Fact No. 49 will be amended as follows:

"49. The use of 3,4-DCAA and 3,4-DCPA as selective post emergent herbicides was not revealed or in any way suggested in the prior art before May 27, 1956."

ORDER.

And now, this 21st day of May, 1970, it is ordered that plaintiff's motion under Federal Rules of Civil Procedure 52 and 59 be and the same is hereby denied.

Opinion in Monsanto Company v. Dawson Chemical Company, 312 F. Supp. 452 (S. D. Tex. 1970).

UNITED STATES DISTRICT COURT,

S. D. Texas,

Houston Division.

MONSANTO COMPANY,

vs.

DAWSON CHEMICAL COMPANY AND CRYSTAL CHEMICAL COMPANY.

Civ. A. No. 68-H-400.

April 17, 1970.

MEMORANDUM AND ORDER.

SINGLETON, *District Judge*.

This is a patent infringement suit between the patentee, plaintiff, and the alleged infringers, defendants, who have counterclaimed for a declaratory judgment nullifying plaintiff's patent. Plaintiff is a Delaware corporation with its principal place of business in St. Louis, Missouri. Defendant Crystal Chemical Company is a Florida corporation with its principal place of business in Houston, Texas within this judicial district. Defendant Dawson Chemical Company is a Texas corporation that is wholly owned by defendant Crystal Chemical Company and has its principal place of business also in Houston, Texas. Because this action arises under the patent laws of the United States,

there is jurisdiction under 35 U. S. C. § 271 and 28 U. S. C. § 1338 and venue is proper under 28 U. S. C. § 1400.

The subject matter at the heart of the dispute is a chemical compound known as 3,4-dichloropropionanalide. This compound, also known as propionil or 3,4-DCPA, is one having herbicidal activity. It is the active ingredient in commercial herbicide formulations sold by plaintiff and defendants for use in selectively killing weeds in the presence of rice. Because of this characteristic, it is said to be a selective, post-emergence herbicide, or one which, when generally applied to plants which have sprouted, selects and kills certain of them while leaving other standing and unharmed.[1] Plaintiff's patent issued on May 7, 1968, the same date this suit was filed, on the basis of an application which was presented to the United States Patent Office on February 3, 1967. The application contained a single claim reading: "3,4-dichloropropionanalide." That 1967 application was a division of an application filed May 8, 1961, which in turn was a continuation-in-part of an application filed May 27, 1957. In all three applications Dr. Clarence W. Huffman was named as the inventor.

Plaintiff began selling its herbicide, Rogue, containing 3,4-DCPA in early 1962, and has sold it continuously since that time. The defendants, Dawson and Crystal, first sold their herbicide composition in December of 1967. Since it admittedly contains 3,4-DCPA, there is no question but that defendants have infringed the patent if it is valid. Defendants, however, contend that the patent is not valid and that they have, therefore, not infringed.

3,4-DCPA is a member of a class of compounds known as analides. The May 27, 1957 patent application filed in Dr. Huffman's name disclosed a large class of 3,4-dihalogen

1. This is to be contrasted from non-selective herbicides which kill all plants with which they come into contact and pre-emergence herbicides which kill all plants before they sprout from the ground.

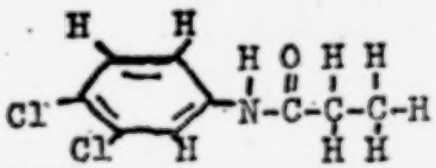
substituted analides[2] as being useful herbicides. Among these disclosures was 3,4-DCPA, although the claims in that application were directed only to its use; it was not claimed as a compound. Apparently, Huffman knew of no disclosure in the prior art of the herbicidal properties which are characteristic of some analides.

Huffman's second patent application, filed on May 8, 1961, narrowed somewhat the range of compounds claimed as herbicides. 3,4-DCPA was likewise disclosed in this continuation-in-part of the 1957 application. From May 27, 1957 until May 7, 1968, when the patent issued, there was continuously pending in the Patent Office a disclosure of the compound 3,4-DCPA, its method of preparation, and experimental evidence of its activity as a herbicide.

There is no doubt that 3,4-DCPA is a novel composition of matter and that 3,4-DCPA was not only disclosed as a useful herbicide, but that, indeed, it has found very substantial commercial utility as a herbicide. Dr. Huffman was hired in 1952 by the Lion Oil Company in El Dorado, Arkansas, for the specific purpose of instituting a research program in the field of herbicides and defoliants. 3,4-DCPA was invented in the course of that program. Mon-

2. The structure of 3,4-DCPA starts with a modified benzene ring at one end of the molecule with an analide radical, comprised of three carbon atoms, six hydrogen atoms, and one atom each of nitrogen and oxygen, attached to the ring in the one position. There are also attached to the ring hydrogen atoms in the two, five, and six positions and chlorine atoms at three-four positions. To put it in a pictorial fashion:

It should be understood that the benzene ring is a hexagonal chain consisting of a carbon atom at each of its six corners.



santo purchased Lion Oil Company about mid-1955 and merged Lion into Monsanto.

For the most part, the research program was carried out either by Huffman or by his assistant synthesizing the chemical compounds to be tested as herbicides and defoliants. Huffman also purchased some of the candidate compounds, but these amounted to no more than about 20% of the total tested in the course of the program. Some of the compounds tested as herbicides and defoliants during the course of the research program which were synthesized by Huffman were thought to be new compounds, but a number of the compounds synthesized by Huffman, and, of course, all the compounds purchased by him, were known to chemical science.

Because Lion Oil had no greenhouse facilities of its own to screen and test herbicide candidates on plants, Lion entered into two contracts with the Midwest Research Institute, a private, non-profit research organization located in Kansas City, Missouri, to carry out the testing of the candidate chemical compounds sent to it by Huffman for herbicidal and defoliant properties. In the course of the Lion Oil herbicide research program and the contract with Midwest Research Institute which terminated at the end of 1955, Dr. Huffman sent about 300 different chemical compounds to Midwest for screening as herbicides and defoliants. The herbicidal activity which Dr. Huffman was searching for included at all times during his research program both pre-emergence and post-emergence activity. Dr. Huffman conceived of 3,4-DCPA and had it synthesized for the specific purpose of determining its herbicidal and defoliant properties.

The chemical compounds tested by Midwest for Dr. Huffman were of many different chemical types. Huffman initially sought to test compounds which in terms of their chemical structure were similar to certain then commer-

cially available herbicides. By 1954, however, he had evolved a novel theory which led him to select his candidate chemicals in a different and unique way. Dr. Huffman made scale models of the molecules of a number of commercially successful herbicides and measured their over-all dimensions. He found that when stretched out several were about 13 angstroms in length and that when compressed they measured about 10 angstroms. Based on these findings he formed models of other chemical compounds which approximated such dimensions and which had no known herbicidal activity, many of which like 3,4-DCPA had never even been made before. He then proceeded to synthesize and have those chemicals tested as herbicides.

In late 1954, during the course of his herbicide research program and as a result of his examination of the scale models, he gave instructions to Mr. Swafford, a chemist assisting him, to synthesize 3,4-DCPA, a compound having approximately the desired dimensions. By January 11, 1955, 3,4-DCPA had been synthesized by Mr. Swafford for Dr. Huffman. It was sent along with a group of other compounds, including 2,4-dichloropropionanalide,[3] a known chemical compound also having the same dimensions as 3,4-DCPA, but which likewise had never been tested as a herbicide. Dr. Huffman expected the 2,4-dichloropropionanalide to show superior herbicidal activity as compared to 3,4-DCPA because the 2,4 substitution of the chlorine atoms in that compound was similar to that in the well-known selective post-emergence herbicide 2,4—D. But

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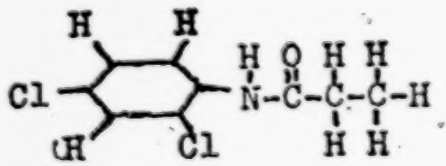

as it turned out, 2,4-dichloroproprionanalide showed essentially no herbicidal activity while 3,4-DCPA and the closely related 3,4-dichloro-isobutyranalide,[4] also ostensibly first synthesized by Dr. Huffman, proved to have the highest activity on the plants treated at Midwest.

The testing of 3,4-DCPA by Midwest Research Institute was completed by May, 1955. Its report dated June 15, 1955, explicitly stated that 3,4-DCPA had demonstrated high activity, but that 2,4-dichloropropionanalide should be dropped from further consideration. The data on the herbicidial testing of 3,4-DCPA set forth in Midwest's report showed that all of the plants sprayed with the herbicide formulation containing that compound were killed except rye grass which was not completely killed, although about 90% of the stand of rye grass was killed. This indicated to Dr. Huffman that 3,4-DCPA should be tested further for selectivity on such plants and that the next logical step was to retest at a lower dosage or rate than eight pounds per acre at which Midwest conducted its initial screening. In a later test of 3,4-DCPA on rye grass and other plants at the rate of one pound per acre, some of the same plants killed with 3,4-DCPA killed at eight pounds per acre were again killed at one pound per acre, but the rye grass was completely unharmed, thus confirming the prior indication of selectivity. This data appears in the patent in suit.

The record is clear that it was as a result of Dr. Huffman's work that 3,4-DCPA was first found to be a selective herbicide. As previously mentioned, he saw an indication

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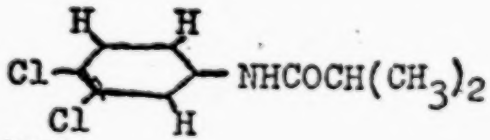

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of selectivity in the Midwest test of 1955. By letter of December 28, 1956, Dr. Huffman asked Dr. Hamm to test 3,4-DCPA at low rates as a post-emergence herbicide. It was as a result of Dr. Huffman's theory as to the significance of molecular size that he was able to arrive at the herbicidal activity of 3,4-dichloro substituted analides in general and of 3,4-DCPA specifically.

The touchstone for the determination of the validity of any patent is the strong presumption that arises in favor of that validity when the Patent Office decides to grant the patent. See *Mumm* v. *Decker & Sons*, 301 U. S. 168, (1937). As is provided by 35 U. S. C. § 282, "A patent shall be presumed valid. . . . The burden of establishing the invalidity of the patent or any claim thereof shall rest on a party asserting it." Because of the expertise with which the personnel of the Patent Office are endowed, that burden is a heavy one.

One of the defenses raised is that the chemical compound 3,4-DCPA was anticipated within sections 102(a) and (b) of Title 35, U. S. C. In substance, these sections provide that a person is entitled to a patent unless certain conditions are present. Those conditions include among other things, the invention being known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before it was invented by the applicant. 35 U. S. C. § 102(a). Similarly, subsection (b) precludes one's right to a patent if the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States. In order for there to be an anticipation by way of description within the meaning of section 102(a) and (b), it is necessary that the prior art reference discloses the composition of matter claimed. *Smith, Kline & French Laboratories* v. *Clark & Clark*, 157

F. 2d 725 (3rd Cir. 1946). Defendants have cited two references, each of which they contend discloses 3,4-DCPA.[5] Those references are a 1938 United States Patent No. 2,133,340 to Bienert and a 1928 literary composition by *Cornelia Fontein in Recueit Trav. Chim.*, volume 47, pages 635-37.

The Bienert patent is directed toward the synthesis of acylamino phthalocyanine dyes. The starting materials used in this synthesis fall into three general classes of chemical compounds. All three classes are characterized by an acylamino substituent on a benzene ring. Further, one class has ortho-dinitrile benzene substituents, a second class has ortho-halonitrile benzene substituents, and a third class has ortho-dihalo benzene substituents. Each of these classes include many thousands of compounds. At trial the defendant's expert witness testified that Bienert, by using the following language, designated a preferred or narrowed class within these many thousands of compounds:

> "As starting material o-dinitriles of that benzene series are used which have as substituents an amino group wherein a hydrogen atom is substituted by the radical of an aliphatic or aromatic acid, f.i. by acetyl, butyryl, propionyl, benzoyl, methyl benzoyl, methoxy benzoyl, etc. Of course, there may also be used as starting materials such compounds of the benzene series which contain an acylamino group and which are suitable to be transformed into o-dinitril compounds during the reaction as o-halogen nitriles and o-dihalogen benzenes."

Defendants' expert agreed, however, that even this narrowed and preferred class, if that it was, included at least 500 compounds.

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5. For reasons which will be explicitly presented below, the only references which raise the anticipation question are those prior to the filing date of the 1957 application.

While Bienert discloses broadly the class of orthodihalobenzene derivatives, it contains no specific disclosure of any such dihalobenzene derivative, or of a dichlorobenzene derivative. The only halogen derivative specifically mentioned is a bromine substituted compound. Bienert does not contain the word "3,4-dichloropropionanalide" or a structural formula for the compound 3,4-dichloropropionanalide or any other indication of this specific compound. There is no indication in the Bienert patent that Bienert either made or contemplated making the compound 3-4-dichloropropionanalide. The only utility disclosed by the Bienert patent for the ortho-dihalogen derivatives encompassed within the third class of compounds disclosed is as a chemical reactant used to prepare a further chemical reactant which in turn is used to make a phthalcyanine dye. There is no mention in Bienert that any of these compounds would be effective as herbicides.

The Fontein article cited above is a chemical mechanism study and does not disclose or purport to disclose a class of compounds. It discusses a rearrangement of an N-chloroacylanalides to a 4-chloroacylanalides and seeks to discover the effects of a structural change upon this rearrangement. If each of the possible permutations and combinations of the reaction generally illustrated on page 638 of the Fontein article were carried out, which they were not, a minimum of 40 possible compounds could be conceivably prepared. One of these 40 might be 3,4-DCPA, but Miss Fontein actually carried out only nine such reactions and got only nine compounds, none of which was 3,4-DCPA. It was not necessary for her to use 3,4-DCPA to perform the tests she undertook. The Fontein article discloses no interest in the utility of any of the nine compounds said to have resulted from her mechanism study.

It has long been a principle of patent law that a prior art reference, whether the reference is an earlier patent

or some other publication, does not anticipate unless it is disclosed in such full, clear, and exact terms as to enable any person skilled in the art to which the invention relates to practice it. *Deller's Walker on Patents,* Vol. 1, sections 60 and 61 at pages 277, 285. As the Supreme Court said in *Seymour* v. *Osborne,* 78 U. S. 516, 20 L. Ed. 33, 42 (1871):

> "Patented inventions cannot be superseded by the mere introduction of a foreign publication of the kind, though of prior date, unless the description and drawings contained and exhibit a substantial representation of the patented improvement in such full, clear and exact terms as to enable any person skilled in the art or science to which it appertains to make, construct and practice the invention to the same practical extent as they would be enabled if the information were derived from a prior patent. *Mere vague and general representations will not support such a defense, as the publication must be sufficient to enable those skilled in the art or science to understand the operation of the invention, and to carry it into practical use.* Whatever may be the particular circumstances under which the publication takes place, the account published to be of any effect to support such a defense must be an account of a complete and operative invention capable of being put into practical operation." (Emphasis added.)

A mere suggestion in a prior art reference is not enough, and vague, indefinite, or ambiguous disclosures do not anticipate. *Deller's Walker on Patents, supra,* at p. 286.

Since it is true in determining anticipation each reference must be considered separately, one by one, and not in combination, *Firestone* v. *Aluminum Co. of America,* 285 F. 2d 928 (6th Cir. 1960), it would seem that judged by these standards neither the indirect reference to 3,4-DCPA in Fontein, nor the generic class of compounds mentioned in Bienert is by itself a sufficiently clear disclosure as to

constitute an anticipation. Defendants, however, contend that a skilled chemist upon reading either of these references would immediately envisage the compound 3,4-DCPA. In doing so, they rely upon such cases as *In re Baranauckas*, 228 F. 2d 413 (CCPA 1955); *In re Petering*, 301 F. 2d 676 (CCPA 1962); *In re Rosicky*, 276 F. 2d 656 (CCPA 1960); and *Merck & Co. v. Marzall*, 197 F. 2d 206 (D. C. Cir. 1962).

In *Baranauckas, supra*, the applicant claimed as a compound 1,2,3,4-tetracyclopentadine. A prior art patent showed that cyclopentadine reacted with a hypobromite solution to form hexabromocyclopentadine. The prior art teaching made it clear that chlorine could be interchanged with bromine and the structural formula of the compound 1,2,3,4-tetrabromocyclopentadine was presented as an intermediate step. This, the court held, was a disclosure, though the applicant's claimed compound was not specifically named. *Baranaukas, supra*, is to be contrasted from the facts of the case at bar in that the range of possibilities for substitution of various elements is much narrower. There, only chlorine and bromine were interchangeable, whereas here, there are forty possible compounds in the Fontein article and a minimum of 500 possible compounds in Bienert. Nothing is to be found in either reference pertaining directly to 3,4-DCPA.

In re *Petering, supra*, is another case in which the applicant's claimed compound was held to be anticipated. There certain of the applicant's claims were generically disclosed in a prior art patent, the author of which clearly indicated a preference for a particular class of compounds, which included some twenty members. The court in reaching this result concluded that one skilled in the art, which was pharmacology, on reading the earlier patent would at once envisage each member of the limited class preferred. This holding, which was limited by the court strictly to its facts,

has no application here, again because of the large class of compounds mentioned in Bienert and the large number of potential compounds which could be synthesized by the various reactions in the illustration at page 638 of Fontein.

In re *Rosicky, supra*, held that the applicant's claimed compound, useful for its spasmolytic and antihistiminic properties, was anticipated by reason of a generic disclosure in a prior patent. The court, however, emphasized that one of the medicinal properties cited in the application was disclosed in the patent held to be anticipatory; here, neither the properties of Bienert's starting material nor those of the compounds yielded by the reaction illustrated in the Fontein article are so disclosed.

In *Merck & Co.* v. *Marzall, supra*, the Patent Office rejected the applicant's claim for thiamin mononitrate as a compound. This rejection was based on a prior art patent specifically disclosing a closely related compound, thiamin monobromide, but specified that the nitrate radical along with several other substituents could be used interchangeably. The court upheld the rejection by the Patent Office. Unlike the facts of the present case, there was in *Merck & Co.* v. *Marzall, supra*, a direct reference to the plaintiff's claimed compound by the specific contemplation in the prior art reference of thiamin mononitrate. Here, the prior art is devoid of a specific contemplation of 3,4-DCPA.

As a general matter, the size of each class of compounds held to anticipate in each of these cases is more limited than the genus discussed in the Bienert patent and the projections made in the Fontein article. Moreover, in each of these cases it is to be observed that there is a logical relationship between the properties disclosed in the prior art references and the properties inherent in the claimed compound in dispute. The facts of the present case are more closely analogous to those of *In re Ruschig*, 343 F. 2d 965 (CCPA 1965). There, the Patent Office rejected

Ruschig's application on the ground that the claimed compound was generically disclosed in a prior art patent. The Board of Patent Appeals affirmed in an opinion relying upon the *Petering* case, *supra*. The court reversed, holding that the Board's reliance on *Petering*, *supra*, was misplaced because of the diversity and the generality of the possible compounds:

> "We did not intend our Petering opinion or decision to become a precedent for the mechanistic dissection and recombination of the components of the specific illustrative compounds in every chemical reference containing them, to create hindsight anticipations with the guidance of an applicant's disclosures, on the theory that such reconstructed disclosures *describe* specific compounds within the meaning of section 102." (343 F. 2d 974—emphasis THE Court's.)

Hind-sight anticipations mentioned in *Ruschig*, *supra*, is the very thing defendants have attempted here. They have seized upon a passage from the Bienert patent and an illustration from the Fontein article, pointed to each of the chemical substituents found in each reference, recombined certain of them to form the compound 3,4-DCPA, and then have attached to each reference the magic label of anticipation. This they cannot do.

It is clear beyond doubt that even after Dr. Huffman discovered 3,4-DCPA, the fact of that discovery would not lead one of ordinary chemical skills to anything which might be in the prior art. Prior to that discovery, no one had ever prepared 3,4-DCPA and it could not be found on any chemical list in the world. Certainly, there is nothing in the Bienert patent or the Fontein article, neither of which manifests any interest in herbicides, to draw the attention of those engaged in herbicide research. Dr. Huffman did testify on cross-examination that it would take a skilled chemist only an hour to write down the equation in the portions of Bienert and Fontein defendants have cited, but

on redirect examination he further testified that it would take two years to synthesize all the chemicals yielded by the reactions represented by these various formulas.

Dr. Huffman concluded that a skilled chemist upon seeing either reference would not immediately envisage 3,4-DCPA. An expert offered by defendants, Dr. Roberts, testified to the contrary, that a skilled chemist would immediately see 3,4-DCPA. Whether or not it would be immediately seen depends upon one's point of view. Hindsight anticipation would make it easy for Dr. Roberts to say that he would immediately see 3,4-DCPA when it is that exact compound he has in mind as he considered each reference. On the other hand, someone who was not already thinking of 3,4-DCPA would not immediately envisage it as a member of the class of compounds named. To put it differently, one who reads either of the cited references is in a position analogous to one who is taking a Gestalt test, widely used in the field of psychology. For instance, if the test consists of a sketch of a jungle scene drawn in such a manner as to conceal within its lines certain creatures which are known to inhabit the jungle, a person who studies the drawing long enough will begin to perceive of all the animals which are formed within the drawing. Whenever he again has occasion to see the same picture, he immediately finds all the animals which were not immediately apparent to him the first time he laid his eyes upon it. So here, when the eyes of a skilled chemist come upon Bienert or Fontein, they immediately see 3,4-DCPA when that is the very compound the chemist has in mind when studying these references. It is to be concluded, therefore, that 3,4-DCPA is not anticipated by the prior art.

Defendants also contend that 3,4-DCPA is not patentable because of certain other information known to the public more than one year prior to the 1967 application. Specifically, defendants refer to Southwest Africa Patent No.

827/59, describing and claiming 3,4-DCPA as a selective post-emergence herbicide, issued to Rohm & Haas Company, a copy of which was obtained by Monsanto by September 10, 1959. Defendants also call attention to the Southern Weed Conference attended by Monsanto representatives in January, 1960, where Dr. Roy Smith of the United States Department of Agriculture presented a report describing 3,4-DCPA as a selective post-emergence herbicide. The report was published in April, 1960. Finally, defendants point out that Monsanto learned as early as April, 1961, that Rohm & Haas had marketed a product known as "Stam F-34" containing 3,4-DCPA.

These facts, however, bear no relationship to whether 3,4-DCPA is in the prior art. The claims made in the 1967 application relate back to the disclosures in the 1961 application which in turn relate back to those in the 1957 application.[6] For purposes of determining the state of the prior art, the effective filing date of the claimed subject matter is May 27, 1957.[7] The basis of this conclusion is 35 U. S. C. § 120, which provides:

> "An application for a patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States by the same inventor shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application."

The first paragraph of section 112 requires that the specification of the patent application "contain a written de-

6. This sufficiently negates any notion that plaintiff abandoned the claimed compound, 3,4-DCPA.

7. See fn. 5, supra.

scription of the invention, and of the manner and process of making and using it, in such full, clear concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

To come within the purview of 35 U. S. C. § 120, the following qualifications must be met by the latter patent application. (1) The same invention must be disclosed. (2) It must be by the same inventor. (3) It must be filed before the patenting of the first application. (4) It must contain a specific reference to the earlier file application. There are no conditions other than those of section 120. *Technicon Instruments Corp* v. *Coleman Instruments*, 255 F. Supp. 630 (N. D. Ill. 1966), affirmed 385 F. 2d 391 (7th Cir. 1967). These requirements have been fulfilled here. The same invention disclosed in the 1967 application, 3,4-DCPA, is similarly disclosed in the 1961 and 1957 applications. In each is a written description of the compound, the method of synthesization, and the directions for use, all of which are set forth with sufficient specificity to comply with section 112. Dr. Huffman was named as the inventor in each application. No patent has been granted on any application other than the one made in 1967. Finally, each subsequent application refers to the one immediately preceding it. Consequently, the only prior art references which have been considered are those which predate the filing of the 1957 application.

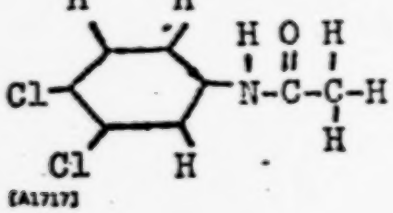
The next issue raised by defendants is whether or not plaintiff's patent is obvious within 35 U. S. C. § 103. The terms of that provision are:

> "A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between

> the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made."

In determining section 103's obviousness, the prior art must be considered in its entirety. *Deller's Walker on Patents*, Vol. 2, sec. 107, p. 114. In this case the entire prior art includes Bienert, Fontein, and a closely related compound which also has herbicidal properties, 3,4-dichloroacetylanalide. At first, the patent examiner rejected plaintiff's 1960 application as being obvious from 3,4-dichloroacetylanalide.[8] To overcome the rejection based on these grounds, plaintiff submitted the affidavit of Dr. Robert Husted which told of the results of various tests comparing the herbicidal effects of 3,4-DCPA, 3,4-DCAA, and other related compounds. The plants to which 3,4-DCPA and 3,4-DCAA were applied included cotton cocklebur, crab grass, barnyard grass, sugar beet, wheat, velvet leaf, rice, wild buckwheat, foxtail, and radish. At one of the rates at which the herbicides were applied, two pounds per acre, 3,4-DCPA exhibited with all plants, except for rice and wheat which were unaffected, severe phytotoxicity with the barnyard grass and foxtail and fatal phytotoxicity with the remainder of the plants tested. 3,4-DCAA, however, showed only slight phytotoxicity with most of the plant

8. Herein 3,4-DCAA, the structural formula for which is:



[A1717]

species, including rice, and no phytotoxicity with the others. On the basis of this information, the patent examiner set aside the earlier rejection and granted the patent.

Before a chemical compound can be held as unobvious over another prior art compound which is closely related structurally as 3,4-DCAA is to 3,4-DCPA, it is necessary that the former possess unexpected beneficial properties in fact not possessed by the latter. *In re Henze*, 181 F. 2d 196 (CCPA 1950); *In re Mod*, 408 F. 2d 1055 (CCPA 1969). It is not sufficient that there be merely a difference in degree, *In re Henze, supra;* the claimed compound must be markedly superior. *In re Coes*, 137 F. 2d 1012 (CCPA 1949). Those circumstances are present in this case. 3,4-DCPA does not differ from 3,4-DCAA merely in degree of phytotoxicity, but is markedly superior as to the varieties of plants which are affected by it. The patent examiner correctly concluded that 3,4-DCPA does in fact possess unexpected beneficial properties not obvious from 3,4-DCAA. There is certainly nothing in Bienert or Fontein, considered together, which would alter that conclusion. It is held, therefore, that 3,4-DCPA is not obvious from the prior art.

Notwithstanding this finding of lack of obviousness, defendants urge that the patent is invalid because plaintiff allegedly withheld from the Patent Office certain information tending to show that 3,4-DCPA was obvious from 3,4-DCAA. This information consisted of the results of tests in which 3,4-DCPA and 3,4-DCAA had been applied at two pounds per acre to plant species not mentioned in the Husted affidavit and at rates of application other than that of two pounds per acre to all plant species tested. Some of the items not mentioned in the affidavit include (1) that pigweed is equally vulnerable to both 3,4-DCPA and 3,4-DCAA at two pounds per acre which is sufficient to kill it, (2) that at two pounds per acre, 3,4-DCPA exhibits only

moderate phytotoxicity on morning glory and wild oat and phytotoxicity on brome, and (3) that generally 3,4-DCPA is less active at application rates under two pounds per acre. In addition, the Husted affidavit shows that radish is completely killed at two pounds per acre while the test chart, on which the affidavit is based, shows only moderate phytotoxicity at that rate.

The crux of defendants' argument is that plaintiff breached its duty to the Patent Office and to the public by failing to disclose in the affidavit all of the information gained through the tests conducted by Dr. Husted. In effect, they are charging that plaintiff perpetrated fraud upon the Patent Office. If this is true, then, of course, the patent is unenforceable. *Baldwin-Lima-Hamilton* v. *Tatnall Meas. Sys. Co.*, 169 F. Supp. 1, 21 (E. D. Pa. 1958), affirmed 268 F. 2d 395 (3rd Cir. 1959). Compare *Precision Instr. Mfg. Co.* v. *Automotive Maintenance Mach. Co.*, 324 U. S. 806 (1945) wherein it was held that the equitable doctrine of unclean hands barred plaintiff from enforcing a patent against an infringer when the patent was issued upon the basis of perjured testimony and suppression of facts which plaintiff had reason to know about. To establish this defense, it is necessary that defendants prove several elements, including the making of false or misleading statements and an intent to deceive the patent examiner. *Corning Glass Works* v. *Anchor Hocking Glass Corp.*, 253 F. Supp. 461, 471 (D. C. Del. 1966), rev'd. on other grnds., 374 F. 2d 473 (3rd Cir. 1967). There is also a further requirement that defendant must prove that the information was material in the sense that if the patent examiner had known of the additional facts regarding the Husted test, he would not have issued the patent. *Baldwin-Lima-Hamilton Corp.* v. *Tatnall Meas. Sys. Co.*, *supra*; pp. 24-25; *Charles Pfizer & Co.* v. *Federal Trade Commission*, 401

F. 2d 574 (6th Cir. 1968); But Contra, *Corning Glass Works* v. *Anchor Hocking Glass Corp., supra.* Unless this essential materiality is demonstrated a false statement will not destroy the validity of the patent. *Edward Valves,* v. *Cameron Iron Works,* 286 F. 2d 933, 947 (5th Cir. 1961). The burden on defendants in their efforts to prove fraud is a heavy one. *Edward Valves,* v. *Cameron Iron Works, supra.* The law is settled that the proof of fraud must be clear, unequivocal, and convincing and a mere preponderance of the evidence which leaves the issue in doubt may not properly be a basis for a finding of fraud. *Baldwin-Lima-Hamilton Corp.* v. *Tatnall Meas. Sys. Co., supra,* p. 25. When these guidelines are applied to the present case, the inescapable conclusion is that defendants have failed in their burden of proof. The only misinformation presented to the Patent Office is the degree of phytotoxicity of 3,4-DCPA on radishes. There is no evidence that this small corner of a broad picture presented to the patent examiner materially influenced the decision to grant the patent. The remaining contention on unclean hands relates not to what was said, but rather to what was not said. Defendants have not established that the withholding of this information was done with intent to deceive the Patent Office. They have similarly failed to prove the materiality of the information withheld, that the patent examiner would have rejected the application had he known of the matters said to be withheld as was true in *Charles Pfizer & Co.* v. *FTC, supra.* To overcome the initial rejection by the patent examiner, it was necessary for plaintiffs to convince her that 3,4-DCPA had properties neither predictable from, nor in fact possessed by, 3,4-DCAA. By the manner in which they went about this task, plaintiffs did nothing more than put their best foot forward. Defendants' contentions on this point are therefore without merit.

Another ground upon which the validity of plaintiff's patent is attacked is that plaintiff, by waiting until 1967 to make a divisional application focusing upon 3,4-DCPA as a compound are guilty of late claiming and laches.[9] The origin of this "late claiming" defense is found in the Supreme Court's decision in *Muncie Gear Works* v. *Outboard Marine & Mfg. Co.*, 315 U. S. 759 (1942). There, it was held that claims added by amendment to a pending application for a patent do not furnish the basis for a valid patent if there was public use or sale of the device which they are claimed to cover more than two years before the first disclosure of the subject matter of these claims to the Patent Office, even though the use or sale was not more than two years prior to the original application.[10] The justification for this rule is that a patentee should not be permitted to claim the invention of another which has gone into public use—that is, to appropriate that which has gone into the public domain for which he was not really responsible. *Chicago & N. W. Ry. Co.* v. *Sayles*, 97 U. S. 544 (1878). See also *Webster Elec. Co.* v. *Splitdorf Elec. Co.*, 264 U. S. 463 (1924); *Pratt & Whitney Co.* v. *U. S.*, 345 F. 2d 838 (Ct. Cl. 1965); *Woofter* v. *Carlson*, 367 F. 2d 436 (CCPA 1966); *Metallizing Engineering Co.* v. *Kenyon Bearing & Auto Parts Co.*, 153 F. 2d 516 (2nd Cir. 1946); *Jones* v. *Freed-Eiseman Radio Corp.*, 47 F. 2d 174 (2nd Cir. 1931); *Veaux* v. *Southern Oregon Sales, Inc.*, 33 F. Supp. 605 (D. Ore. 1940), affirmed 123 F. 2d 455 (9th Cir. 1941). In each of these cases, it was held that patent claims added by way of amendment or division of an original patent application were not valid when (1) the

9. In this context at least, there seems to be no perceivable difference between these two terms.

10. The two year period mentioned in the phrasing of this holding would now be one year by virtue of an amendment to section 4886, Revised Statutes, an earlier version of 35 U. S. C. section 102(d).

original claims were broadened to include subject matter theretofore not presented and (2) the subject matter had become known to the public before the claims were ever made. Here, 3,4-DCPA was specifically carved out of the parent application in the 1967 division. This represented a narrowing rather than a broadening of the previous applications. These circumstances are controlled by *Locklin v. Switzer Bros. Inc.*, 299 F. 2d 160 (9th Cir. 1961). In that case, the original patent application filed in 1954 claimed a resin useful in the manufacture of pigments in the process of obtaining that resin. These claims did not then provide what amount of melamine was required to render the resin substantially insoluble in aromatic hydrocarbon solvents. Accordingly, the original application was amended in 1957 and the patent was issued upon the amended application. The court held the "late claiming" doctrine of *Muncie Gear Works, supra*, to be inapplicable.

> "Here the feature of insolubility was disclosed in the specifications of the original application, although its bearing upon the critical limit in the amount of melamine was not expressed. We are not then faced with a claim of new matter nor with an attempt to rectify an inadequate disclosure or to appropriate subsequent developments or discoveries. The amendment actually amounted to no more than a narrowing of the claims to articulate the limitation implicit in the specifications but not explicit in the claims themselves. The circumstances under which the amendment was filed would indicate that it resulted from the ordinary give and take of Patent Office procedures: the shaping of the expression of that which was sought in order to make it conform appropriately to that which it was felt could properly be granted.
>
> "We conclude under these circumstances that no intervening public right can be said to have attached to the insolubility feature of the Kazenas patent or to the matters incorporated in the claims by amendment. . . ." (299 F. 2d 167)

Plaintiffs are not guilty of either late claiming or laches.

Before this opinion is concluded, it should be added that the possible effect of the decision in *Monsanto Co.* v. *Rohm & Haas Co.*, No. 68-1269 (E. D. Pa. 1970) upon the result here reached has been carefully considered. Even though there is an identity of subject matter between that case and this one, the fact nevertheless remains that there is no identity between the parties defendant, nor for that matter is there any privity between the parties defendant in each respective action. Moreover, the defendants here have placed greater emphasis on certain prior art items, namely, Bienert and Fontein, than did the defendants in *Monsanto Co.* v. *Rohm & Haas, Co., supra*, though it is not clear whether the court in that case had exactly the same evidence before it as was offered here. The result on the issues resolved in *Monsanto Co.* v. *Rohm & Haas Co., supra*, does not therefore relieve this Court of its judicial travail of reaching its own independent decision on the merits of the case between these parties and on this record, even though this brings about diametrically opposed decisions on the validity of the same patent against the same attack. There is no res judicata or estoppel by judgment flowing from the earlier decision precluding plaintiff from its day in court against these defendants. *Bros, Inc.* v. *W. E. Grace Mfg. Co.*, 351 F. 2d 208 (5th Cir. 1965); *Edward Valves* v. *Cameron Iron Works, supra*; *Graham* v. *Cockshutt Farm Equipment*, 256 F. 2d 358 (5th Cir. 1958); *Miles* v. *Mathews*, 171 F. 2d 38 (5th Cir. 1948).

For the reasons discussed herein, a decree will be entered enjoining defendants, their officers, servants, employees, and agents from infringement of Letters Patent No. 3,382,280. Judgment will be entered for Monsanto on defendants' counterclaim. Monsanto's request for attorneys' fees is denied, this case not being an exceptional one within the meaning of Title 35, section 285. The Clerk of this Court is directed to file this Memorandum and Order and

forward copies to the attorneys of record. This Memorandum and Order constitutes this Court's findings of fact and conclusions of law.

Counsel for Monsanto is directed to prepare a Final Judgment in accordance with this Memorandum and Order and submit same to the Court by May 4, 1970 for entry, after first obtaining approval as to form from counsel for defendants.